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ABSTRACT

This collection of 20 papers addresses child development and early intervention issues related to literacy acquisition from a cross-cultural perspective. Titles of the papers are: (1) "Preparing Young Children for Literacy: Issues in Theory and Practice" (Lotty Eldering and Paul Leseman); (2) "Jomtien Revisited: A Plea for a Differentiated Approach" (John Bennett); (3) "Interaction of Context with Development: Theoretical Constructs for the Design of Early Childhood Education Programs" (Robert Serpell); (4) "Orientations on Culture: Some Comments on Intervention Programs" (Ype Poortinga); (5) "Interaction between Development Processes and Social-Cultural Context" (T. S. Saraswathi); (6) "Modification of Cognitive Components: Consequences for Early Intervention" (Fons van de Vijver); (7) "Many Kinds of Deprivation: Young Children and Their Families in South Africa" (Linda Richter); (8) "The Developmental Niche: Implications for Children's Literacy Development" (Sara Harkness and Charles Super); (9) "Linguistic Development as Related to Literacy" (Catherine Snow); (10) "How Parents Provide Young Children with Access to Literacy" (Paul Leseman); (11) "Literacy Development in a Multilingual Context" (Ludo Verhoeven); (12) "Responding to Children's Needs: Integrated Child Development Services in India" (Rajalakshmi Muralidharan and Venita Kaul); (13) "Empowerment of Parents: 'Proyecto Padres e Hijos' in Chile" (Johanne Filp and Ximena Valdes); (14) "Culture Sensitive Home Intervention: The Dutch HIPPY Experiment" (Lotty Eldering and Paul Vedder); (15) "A Model of Multipurpose Non-Formal Education: The Case of the Turkish Early Enrichment Project" (Cigdem Kagitcibasi); (16) "Success for All: Prevention and Early Intervention in Elementary Schools" (Robert Slavin and Nancy Madden); (17) "Critical Issues in the Evaluation of Preschool Intervention Programs" (Jan Slavenburg); (18) "Cooperative, Community-Based Evaluation of Preschool Programs" (Howard Richards and Loren Pierce); (19) "Researchers, Program Developers, and the Children Out There" (Nico van Oudenhoven); and (20) "Family, School, and Literacy: Recommendations for Intervention Programs." Most papers include a reference list. (MDM)

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Early Intervention and Culture

Preparation for Literacy

The Interface Between Theory and Practice

Edited by

Lotty Eldering

Paul Leseman

UNESCO Publishing

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UNESCO Young Child and Family Environment Project

Collection: Family *Plus*

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Foreword

The United Nations *Convention on the Rights of the Child* states in its Preamble that the family is the nucleus of society and the natural environment for the development and well-being of the child. Children have a fundamental right to develop their full potential and to be given a fair start in life.

It should be realized, however, that the caring family environment is an ideal. For many children throughout the world, family life is frequently oppressive owing to hard economic conditions, hunger, gender related discrimination or disruption of families or society. The psychosocial environment - so important for development in the early years - leaves much to be desired.

Nonetheless, it is promising to note in recent years the renewed attention given to early childhood by international organizations, governments and NGOs. UNESCO, for example, took the initiative of establishing a special project: the Young Child and the Family Environment. As the project fits perfectly with the Organization's aims in the fields of education and development, it is important that it should be supported by the international professional community and UNESCO's network of national commissions.

The Netherlands National Commission for UNESCO acts as a catalyst in its dual capacity of advisory body to the Netherlands Government and of liaison between UNESCO and the professional community in education, science and culture. Through this book and the international conference organized in collaboration with the Bernard van Leer Foundation at The Hague, 6-8 September, 1993, the Commission hopes to make a contribution to the field of early childhood development and education, and to the International Year of the Family in 1994.

We trust that our effort will be seen as a good example of how our Commission conceives its task: to involve international professionals in the work of UNESCO and to make a Dutch contribution to the work both of UNESCO and the United Nations.

Dr Gottfried Leibbrandt, Chairman
Netherlands National Commission for UNESCO

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The Netherlands National Commission for UNESCO wishes to thank UNESCO's Young child and Family Environment Project for its interest and participation in the Conference "Family, School and Literacy: the preschool period", and for its co-operation in publishing this book.

Our gratitude goes to the distinguished experts in the fields of research, intervention practice and policy making from around the world who participated in the Conference and presented the papers which were the basis of this publication.

The Commission expresses its appreciation to Lotty Eldering, Sylvia Erwig, Dirk de Jong, Paul Leseman, Nico van Oudenhoven, Ype Poortinga and Barbara de Klerk of the Steering Committee which organized the Conference.

With regard to the preparation of the publication, special mention should be made to the work of the editors, Lotty Eldering and Paul Leseman, and to the support rendered by Marijke Hamel and Karin Feteris.

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INTRODUCTION

PREPARING YOUNG CHILDREN FOR LITERACY: ISSUES IN THEORY AND PRACTICE

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This volume addresses child development and early intervention issues as relating to literacy acquisition from a cross-cultural perspective. These issues are currently highly relevant in both the international political and scientific communities.

At the World Conference on Education for All at Jomtien, Thailand, in March 1990, the international community, including virtually all the world's governments, has made a commitment to increase significantly educational opportunity for over 100 million children, more than half of them girls, who at present have no access to basic education and literacy. The overall goal for 1990-2000 is basic education for all children and completion of primary education by at least 80%. It is clear that to achieve these goals, the family's educational and cultural functions must become priority areas for research and action.

In the scientific community, likewise, the past decades have seen several significant developments in theory and research. First, there is a growing awareness that, even in the developed countries where almost ideal circumstances prevail with high quality schools and compulsory schooling up to adulthood, the formal education system has not proved very efficient in educating students to meet the literacy requirements of everyday life. National assessment studies of literacy level have revealed that about a quarter of the adult population can be considered functionally illiterate, that is, their level of reading and writing proficiency is not sufficient to deal with `everyday' literacy demands in their jobs and in society at large. Moreover, surveys have shown that the original socio-economic, socio-linguistic and ethno-cultural position of the child's home environment is strongly reproduced in later literacy patterns in society. This should be a major concern for everyone who subscribes to democratic and egalitarian principles. Functional literacy has become a major dividing line in societies, strengthening and legitimizing already existing divisions between groups along the lines of social class and ethnicity, and its roots are to be found in childhood. Several chapters of this book address the issue of socio-cultural differences in literacy acquisition.

Second, the concept of literacy or functional literacy itself has in a sense been rediscovered and redesigned. Owing to seminal works, such as the famous study by Sylvia Scribner and Michael Cole among the Vai in Liberia and the extensive ethnography of language and literacy practices in three communities in the southern United States by Shirley Heath, literacy nowadays is no longer conceived of as a homogenous construct or a singular competence, which is superior to orality. In fact, the same script can be used for such diverse individual and social purposes as religious recitation, informal social communication, entertainment in leisure time and high-level education. Depending on functions and uses, different kinds of literacy are involved and correspondingly different demands are made on the linguistic, cognitive and motivational equipment of individuals.

A third significant development in theory and research is the discovery that young preschool children spontaneously construct concepts and theories on written and printed language and develop an awareness of key-features of the structure of spoken language relating to its written form, long before entering formal education. Besides early concepts of literacy and awareness of language structure, it has become clear that the development of certain features of oral language competence and general cognitive competence in young children are also relevant for later literacy. Literacy acquisition, in short, begins long before formal literacy instruction commences and, in this respect, the home environment has become a focal point of interest. Young children's 'emergent literacy' has drawn the attention of many researchers in recent years and it is now a well-established fact that children's informally acquired preliteracy skills are among the strongest determinants of the efficiency of formal literacy instruction in school. The broad concept of emergent literacy is the explicit or implicit frame of reference for a number of chapters in this book, both on theory and intervention programs.

The discovery of emergent literacy in young children is part of a broader development in theory and research on child development. What development is all about is not so much the maturation or autonomous construction of cognitive structures, as classical piagetian theory would have it. Development concerns the processes of learning to match basic compentencies to the actual socio-cultural context, to its embedded meaning systems and cultural tools, including written language, which are primarly mediated by social agents, such as the child's parents. In recent years interactionism or social-constructivism, founded on the works of Vygotsky and his followers, has become a dominant paradigm in developmental psychology and education. The focus of researchers has shifted toward social interactions between children, parents, professional caregivers and teachers in the learning environments of home, day-care center and preschool, as the primary social source of development of culture-loaded skills like literacy. Several authors in this book take the social-constructivist perspective as their point of departure.

The developments in theory and research briefly outlined are, in many respects, relevant to the theme of this volume: early intervention to enhance literacy and school success for all. The roots of functional illiteracy in adulthood are to be found in primary socialization processes in the home environment. Characteristics of early socialization processes determine to an important extent subsequent educational efficiency. The concept of emergent illiteracy and the research it has stimulated in recent years, offers more precise conceptual tools and insights into intervention programs. It may guide program construction and the selection of a program's objectives. The broader paradigm of social-constructivism proposes a general framework to gain deeper understanding of the social determinants of development, in particular, of the effects of caregivers older children, and teachers in socialization. Finally, the unravelling of the classical concept of literacy and the concomitant rehabilitation of orality, lay the foundations of an open-minded approach to the social and cultural practices of target communities of intervention programs, and to the hidden potentials, for instance in oral traditions, of these communities for enhancing development and school success of their children. Several chapters in this book, argue in favor of strong links between home culture and program contents, based on respect for the customs, practices and beliefs of the families.

About the book

The book consists of three parts, with an introduction and an epilogue, and treats: theoretical issues from cross-cultural and developmental psychology relevant to the design and evaluation of intervention programs; second, research findings on the relation between child development and literacy and schooling in various cultural contexts; and finally, experiences with intervention programs and evaluation issues.

Experts, from North and South and from diverse academic disciplines have contributed to this book. The aim of the introductory chapter by *Eldering & Leseman* is to integrate two quite different perspectives which together offer a promising approach to prevent or combat educational disadvantage in young children. The first perspective relates to the scientific study of the early cognitive and literacy development of children in sociocultural context. The second perspective concerns intervention in the development process of the preschool child in sociocultural context. We see this book as a first attempt to integrate these perspectives on child development and early intervention. In the second introductory chapter, *Bennett* representing UNESCO, outlines the enormous changes that population increase in the developing world has brought to education worldwide, not least to the large industrial cities of the North. Early childhood and nonformal education models that include the participation of parents and communities, proposed by the *World Conference on Education for All*, must be implemented if the sociocultural and educational handicaps of poor children are to be overcome.

Part one addresses theoretical constructs and orientations on culture which may frame the philosophy, approach and evaluation of intervention programs. *Serpell* distinguishes two types of theories: theories that treat context as a form of external stimulation, and those that conceptualize the context of child development as an incorporating system of social activity. The latter conceive the interaction between the child and its context as a process of socialization leading to integration into the social system. *Poortinga* discusses three orientations on culture: cultural relativism, psychological universalism and behavioral universalism. He concludes that although all three orientations have their strong and weak points, psychological universalism, as a middle of the road position, offers the most promising perspective for tranfer of intervention programs to other cultural contexts. Within the sociohistorical approach of Vygotsky, Cole and colleagues, *Saraswathi* presents findings from cross-cultural, anthropological and ethnographic research on the reciprocal relations between literacy and schooling, the economic and cultural practices of communities, and individual development. She describes a number of exemplary programs, aimed at enhancing literacy and school success of young children, which meet the instructional implications she derives from ethnographic and cross-cultural studies. *Van de Vijver* presents a model of intelligence consisting of four components: pragmatic knowledge, reasoning schemes, metacognition and actual execution. Although all four components are modifiable through intervention, they differ strongly in the effort required to engender substantial and persistent alterations through training. Hence, intervention programs should take this differential modifiability into account.

Part two presents empirical evidence on the impact of the economic and socio-cultural context of young children, in particular their language and literacy development. *Richter* sketches the many kinds of deprivations confronting black children and families in South Africa. Families and communities have a `hidden potential' of knowledge, skills and resources to nurture and educate young children.. Nonetheless, as hardship can take its toll on women and diminish their capacity for consistent and involved parenting, interventions should be directed at caregivers and focus on strengthening family ties, promoting parental commitment to children, and assisting vulnerable women. *Harkness* and *Super* present their views on `the developmental niche' consisting of three subsystems: the physical and social settings in which the child lives; culturally regulated customs and practices of child-care and child-rearing; and parents' cultural belief systems. To intervene effectively in the home setting, it is essential to be familiar with parents' concepts of the child and their customary practices. Evidence from interviews with parents in the Netherlands and the United States supports the importance of belief systems in the developmental niche.

The chapters by *Snow*, *Leseman* and *Verhoeven* focus especially on issues of language and literacy development. *Snow's* basic premise is that literacy development and school success are most effectively promoted during the preschool period by attention to the development of oral language skills. When they grow up, children become capable of more sophisticated language use in situations of 'decontextualized' language use. Many children, however, do not grow up in environments that foster these sophisticated language skills. Snow concludes by sketching the consequences of her theoretical model for the design of preschool classrooms. *Leseman* explores how the social interactive contexts in the home environment influence children's cognitive and language development. His hypothesis that families of different socio-cultural backgrounds differ in the amount, content and quality of the parent-child interactions in literacy related domains is confirmed by his research with Dutch, Surinamese and Turkish families in the Netherlands. *Verhoeven* addresses the language and literacy development of young children in multilingual contexts, especially in the Netherlands. There are psycholinguistic, educational and sociocultural reasons in favor of bilingual education, even in early intervention programs. The evidence shows, however, that high priority should be given to the development of the child's first language.

Part three presents five exemplary intervention programs, implemented in a diversity of cultural settings in developed and developing countries, and representing various approaches and methods. Integrated Child Development Services (ICDS) is the largest preschool intervention program in India and probably in the world, serving nearly 14 million children aged 0-6 and 2.7 million mothers. The program comprises a wide range of activities in the fields of nutrition, health care and non-formal preschool education. It is carried out in courtyard centers by trained paraprofessionals, local community women. *Muralidharan* and *Kaul* conclude that ICDS has yielded dividends in terms of decrease in infant mortality rate, better nutritional status of children, and higher enrollment and better retention in primary schools. Another contribution from a developing country is the chapter by *Filp* and *Valdés* on the Parent and Children Project in Chile. The focus of the project currently lies on weekly parent education groups which discuss topics of child development with the aim of empowering parents, and indirectly, fostering the cognitive development of children.

HIPPY, a home-based intervention program for preschool children, originally developed in Israel, has been adapted in the Netherlands to the educational needs and cultural characteristics of disadvantaged families, especially ethnic minority families. Home-visitors, paraprofessionals preferably selected from the target groups, are the key-agents of the program. *Eldering* and *Vedder* examine the results achieved and discuss why home intervention has failed to live up to the expectations of program developers and policy-makers. In contrast, *Kağıtçıbaşı* presents positive results from a ten-year research project on children who have participated in the Turkish Early Enrichment Project. The intervention consisted of two components: cognitive training of children by the mothers (modeled on the HIPPY program) and mother enrichment through group discussions. Any intervention to support the child's development has, in her view, to start early and to deal with the child's environment as well. Such a contextual-interactional approach would make a program sensitive to the cultural specificity of human relations, the `culture of relatedness' in Turkey's case. The evaluation showed positive effects on children's overall development and school achievement. A follow-up study seven years later, showed substantial differences between the experimental and control children and mothers.

The best time to provide help to children who are at risk is the preschool period and early school grades, when children are still motivated and confident. This philosophy has framed *Success for All*, a centre-based program currently being implemented in the most disadvantaged and lowest-achieving schools in the United States. The program's staff consists of well-trained, highly qualified teachers who stress early intervention and improvement of classroom practice. *Slavin* and *Madden* describe the nature and outcomes of this program based on effective instruction theory, with curricula for young children in prekindergarten, kindergarten, and students in grades 1-3. Its main curricular focus is on reading, as in US schools and elsewhere, school success is virtually identical with reading success in the early grades. Evaluations show that *Success for All* students far outperform control students.

Part three concludes with two chapters on evaluation, expressing more or less opposite views on core issues, such as the nature of the evaluation design, random assignment, the basic impartiality of the evaluator, the use of quantitative methods and advanced statistical techniques. In *Slavenburg's* view, program evaluation studies should be repeated across sites and with different designs to identify the impact of an intervention program. He discusses the advantages and disadvantages of various quasi-experimental evaluation designs, argues for an impartial, methodologically strong, quantitative approach in order to ascertain, before going to scale, the effectiveness of expensive programs, and critically reviews three of the five intervention programs presented in this part of the volume. *Richards* and *Pierce* take quite a different stance on evaluation. Although quantitative approaches can certainly provide important information on a program's quality, especially with respect to promoting individual's learning achievements, in large-scale implementations in politically complicated contexts, as is often the case in developing countries, quantitative, quasi-experimental approaches are simply not feasible. This was illustrated by some dramatic events in the context of the Parents and Children Program in Chile in the seventies and eighties. Furthermore, goals for the community as a whole are also important in large-scale implementations and evaluations though difficult to define in advance, and therefore difficult to evaluate in a quantitative approach. Hence, a stronger ethnographic component should be included in program evaluations.

The present volume is based on a Conference, entitled *Family, School and Literacy: The Preschool Period*, held in The Hague from 6-8 September 1993. In his epilogue, *Van Oudenhoven*, representative of the Bernard van Leer Foundation, gives a personal evaluation of the Conference and what it has yielded. He observes a wide gap between governments, researchers, programs, intermediary organizations and the real poor, the `children out there', which can only be bridged by non-formal support and self-help groups, essential for a program's success. *Van Oudenhoven* concludes that the Conference calls for joint action from grassroots groups, NGO's, researchers, program developers, donors, governments, and international organisations. A number of recommendations distilled from discussions during the Conference are added to the volume.

JOMTIEN REVISITED
A PLEA FOR A DIFFERENTIATED APPROACH

John Bennett[1]
UNESCO

1 Addressing the sociocultural context

The education of the young is an issue of debate in all civilized societies. In the last five years, however, the debate has taken on a new urgency at the international level. Radically new circumstances have changed completely the parameters of education enrolment, particularly in the developing world. Medical science, backed by intense groundwork by governments and United Nations agencies, has transformed the survival chances of infants and children. The iron law of the survival of the fittest no longer operates. Today, fourteen out of fifteen infants worldwide survive until the age of one year.

This tremendous progress places enormous pressure on education systems, which have found it increasingly difficult to keep up with growing numbers. The picture is further complicated by the fact that the vast majority of the world's children are born and survive in the poorer countries of the world, countries in which severe insufficiencies in maternal and primary health care, potable water, shelter, nutrition, welfare services and educational levels, seriously endanger child survival and impede normal child development. As never before, poverty at every level – governmental, municipal, and in the daily life of communities and families – has to be taken into account in planning early childhood interventions in the developing world[2]. Equally, although it is not always realised, poverty, both sociocultural and economic, is an essential factor in the failure of many preschool programmes in the large cities of the industrialized world. In short, child quality and active learning capacity are much diminished by poverty[3], particularly at the youngest ages. It was partly due to the need to find appropriate educational responses to this situation that the Jomtiem World Conference for All took place.

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[1] The views and opinions expressed in this paper are those of the author and do not commit UNESCO in any way.

[2] The term "developing world" is very imprecise. As well as containing several countries devastated by conflict and poverty, it includes also powerful industrial centres with numerous wealthy households. Within its confines, it holds on the one hand, forty-seven Least Developed Countries (LDCs) situated for the most part in Africa and afflicted by severe deficits in material and human resources, and on the other, a host of medium range countries such as China, India, most Latin American states, South Africa, Zimbabwe, Nigeria etc. which despite serious socio-economic problems have sufficient numbers of skilled professionals to undertake the planning and implementation of large-scale basic education programs.

2 Jomtien: a broader vision

The Jomtien World Conference on Education for All, was convened in 1990 by the World Bank, UNESCO, UNICEF and UNDP, in a situation where the educational gains made from 1960 to the early 1980s had been eaten away by even greater population gains. In addition, investment in basic education had stagnated or declined during the 80s. Those years, therefore, were marked by a drastic downturn in quality and management: high rates of repetition of first year classes, low retention rates to the end year of the cycle (Bangladesh at the moment retains only 20%), poor age clustering. As a result, over 150 million children do not have access to primary education today, and of those who do, over 40% will drop out before they are really literate or numerate. Of these non-schooled children, over two-thirds are likely to be girls, especially in South East Asia and the Middle East, a condition which will have negative educational consequences for their children. The World Conference appealed to governments and the international agencies to confront this serious educational decline and growing illiteracy by concentrating energies and investment on basic education. Basic education may be characterized as follows:

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[3] The consequences of poverty on parents and households are now well-documented, namely: poor personal health, low educational attainment including poor knowledge of nutrition, hygiene and health care, social isolation and a tendency to underutilize or have poor access to essential education and health service, a tendency to remain in the poverty trap through long-term unemployment, a tendency to become parents at a younger age, greater likelihood of having high-risk babies etc. The psychosocial development of children from such a background is frequently inhibited, leaving them branded already at the age of four as slow learners. More seriously, poor prenatal care of mothers, premature or low-weight births, malnutrition and ill-health at the infant stage - all endemic in very poor communities - mark or disable the young child.

A concentrated but enlarged vision of education. In a period of economic austerity, investments would target the essential elements of national education, but with a wider vision than that of the traditional, preceptive primary school. A major innovation of Jomtien, basic education would now reach out to the entire community from infants to adults with concentrated programs of quality and relevance. National basic education would therefore be composed of four pillars:

- a four year concentrated, primary cycle for all children which would provide basic reading, writing, numeracy and life skills, both family and environmental;
- non-formal education for children and adults not reached by schools, especially women;
- expansion and improvement of early child development, care and education services;
- further teaching of basic knowledge and life skills to all the population through the use of the various communication channels.

Effective management both at the national and school levels. A second innovation was to be a serious renewal of education management. At the national level, countries following the Education For All (EFA) process should:

- hold regular, national-level policy meetings on EFA;
- create information campaigns to sensitize the public to the importance of basic education;
- adopt concrete and measurable EFA goals;
- formulate a national strategy or national plan of action covering the development of integrated basic education services;
- create a national body with executive responsibility for promoting and coordinating basic education policies, programs and services;
- increase significantly national investment in basic education;
- hold pledging conferences with donor countries and agencies in order to bring more resources to basic education.

At the level of the school, the same concern for more effective management is evident. According to UNICEF and UNESCO documents on basic education, school management should concentrate on the essential elements of the school situation:

- the child: its gender, basic health, developmental stage and active learning ability;
- the teacher: training, status, pupil/teacher ratio, and in particular, careful selection and responsibilization of the head teacher;
- the school: its accessibility (financial, closeness), completeness, timing of lessons and health environment;
- the curriculum: quality, relevance;
- the pedagogy: child-centered, participative and active learning approaches, peer instruction, sufficient books and materials;
- continuous evaluation and monitoring. The actual learning achievement of children should be assessed regularly in function of the curriculum. Monitoring of repetition and retention rates was to be ensured as well as the promotion of optimum age clustering.
- supportive administration. The school administration and management should be decentralized (effective local decision making), supportive of innovation, assist parents, teachers and children, ensure egalitarian access in good conditions, provide continued training for teachers;
- sufficient and regular financial support.

3 Reaction to Jomtien by the international agencies

At the level of the funding agencies, both the World Bank and the United Nations Development Fund (UNDP) have more than doubled their funding of basic education in the developing world. In parallel, UNICEF has developed its basic education personnel at national level and has created a central unit at headquarters in New York to co-ordinate educational activities, including early child development. Its funding of basic education has increased from $46 million dollars to $79 million annually.

Likewise, UNESCO has stepped up its funding for basic education bringing it to $54 million biennially. With UNICEF, it has created a joint committee for EFA, and together both organizations have embarked on several co-operative programs, including the ambitious *Nine Most Populous Countries Program* in which the great majority of the world's illiterate people live. In addition, an early childhood and family unit was established.

4 Reaction to Jomtien at country level

Reaction to Jomtien has been very positive worldwide and has elicited the formulation of EFA goals by over 100 countries. Over half of those countries have launched some sort of information campaign but far fewer countries have yet taken the concrete steps to establish a national EFA mechanism or increase national budget for basic education. It is still too early, however, for data to be complete but a change in tendency toward investment in basic education seems to be happening. In addition, a number of stripped-down, closely managed primary education models have emerged, giving hope to many ministries of reaching one of the EFA goals of minimum 80% enrolment by the year 2000.

A much cited model is BRAC, the Bangladesh Rural Advancement Committee, which in 1985 opened 22 experimental, non-formal schools for children aged 8 to 10 years in remote, rural villages. In 1988, BRAC extended its work to primary education for older children aged 11 to 14. Through excellent management and supervision, continuous teacher training and support, community involvement, the provision of practical curricula, teacher guidelines and support materials, BRAC schools have gained a reputation for quality. Reading and numeracy results are equal to those achieved in government schools. BRAC now runs over 7000 schools serving about 200,000 children, mostly girls, in isolated country villages, and by 1998, plans, with Government and donor aid, to have founded 100,000 new schools.

5 The post-Jomtien approach

What has issued so far from Jomtien is a concentration on the four year primary cycle. There are good reasons for this choice. The primary school network already exists and its potential is great if effectively used. In addition, it is easier for international agencies to work sectorially within an established formal system rather than launch out into the uncertain waters of non-formal education and early childhood programming. But this formal approach carries the risk of not responding adequately to sociocultural context. Some indication of this oversight is evident from:

A relative neglect of the three other pillars of basic education, i.e. on-formal education, early child development and media education. Both the Jomtien declaration and educational research recommend action in these three domains, and funding, in fact, is growing slowly. A difficulty for international agencies, however, is that frequently neither young children nor adults have a ministry responsible for their education. In addition, family and community education is notoriously difficult to promote (not least in a context where the media are dominated by commercial concerns), implement and evaluate. For this reason, it has been carried out essentially by the major international NGOs in the field of child care and education (International Directory, UNESCO, 1991), such as, the Bernard van Leer Foundation and Save The Children, who continue to promote child welfare and parent education through a multitude of co-operative ventures with government and local NGOs. Their work has been exemplary in its concentration on the integral development of the child, grass-roots contact, promotion of local expertise, attention paid to community development. (Chetley, 1990).

On the other hand, international agencies tend to concentrate on formal systems although field experience shows that the more disadvantaged the situation the less appropriate is the sole formal education approach. Thus early childhood development programmes tend to be seen in terms of preschool systems and as a preparation for school. The point of view is legitimate: preparation for school is important but present knowledge of both child development and social context imposes a wider approach.

Medical, psychological and educational research suggest that the age from conception to six (and in particular, prenatal to three) is the foundation of the adult's physical, affective, social and cognitive well-being. Nutritional, sensory motor, psychosocial or cognitive advances or deficits incurred by children in those crucial early years are interactive and cumulative to a much greater extent than ever again in the life cycle. The problems which cause difficulty in school - lack of good health, sight and hearing defects, lack of concentration, low learning ability - are generally rooted by the age of four when children enter kindergarten. Thus, the necessity of first providing good quality, integrated care and education during the early years of life.

Mothers are ideally placed to provide such care, and in addition, if they are educated in basic life skills, they can dramatically change the quality of life of their children and inspire social and economic progress in their communities. Studies of the question (King and Hill, 1992) suggest that the education of mothers is as important in its effects as any other educational enterprise. *It is linked significantly with falling fertility rates*, decreasing infant and mother mortality, enhanced levels of infant and child development. Even in the context of the narrow, education model, three family indicators figure prominently among the major indicators of the educational success of children, viz. the care that has been given to the infant from the prenatal period to three years; second, the educational and income level of the mother, and third, the quality of family/community support given to the child's learning at school.

For these reasons, countries worldwide are beginning to understand the advantages of improving or establishing health and education services for the very young, in which mothers are actively involved. Though such initiatives have much wider implications, they can be supported by education ministries as preparation for successful learning achievement and schooling. But as yet, sufficient investment has not followed, although the possibility of establishing low-cost national programs is real and already modelled (Myers, 1990, 1992). Parental and adult education is even more poorly endowed, although community mobilization is essential for successful educational intervention in disadvantaged environment, in which the majority of the world's children live.

The lack of evaluation: The Jomtien management approach has been widely welcomed but it is by no means certain that concentration on effective management can by itself bring the desired results of providing increased enrolment and improved learning achievement. Many variables enter into successful education initiatives, e.g., does the success of the BRAC program stem from better management techniques or from community involvement, in particular, the recruitment and training of local mothers as teachers? If the latter is an explicatory factor, then perhaps the important variable is not just an improved systemic approach but decentralization and effective, nonformal educational approaches.

The persistence of a narrow, traditional school model: Most recent successful innovations in education, whether at pre-school or primary level, are decentralized, non-formal in character and rely to a great extent on community interest and involvement. This is an aspect often overlooked, not by the Jomtien declaration itself, but in post-Jomtien *practice, with its focus on the primary school. There is the inherent* danger, however, that the institutional model may resist reform and change more slowly than expected. For example, a characteristic of the centralized primary school system was to isolate children from parents and local communities in order to socialize them in the national culture, language and values as conceived by the state. This model is changing slowly. In most countries, administration, teacher recruitment, curricula and evaluations are still heavily centralized, with little encouragement of local initiative. Emphasis is displaced from learning achievement and relevance onto acquisition of knowledge and skills. Thus, rather than extending upwards the more pedagogically appropriate early childhood model to eight-year-olds, governments in many countries will choose to extend downwards the instructional school model to cater for five and six-year-old children. In some contexts, the expedient can work relatively well, particularly when children come from stable homes and do not suffer from poverty and ill-health, where teachers are properly trained and teacher/pupil ratios are relatively low. That is the situation in only a small minority of countries, and even there, it is not characteristic of many large, industrial cities. For this reason, if one is serious about egalitarian access, intervention programs need to be put into place for preschool children from disadvantaged environments. Because it intervenes too late, the traditional primary model is unable to master fully the problem of inequality of opportunity and waste of human potential. Already at entry age, even at age four, serious inequalities between children have begun to appear, and assessments reveal developmental delay in large numbers of children from poor or minority backgrounds (Vargas Adams, 1990). As the multicultural nature of the industrial economies has increased, integrated and culturally appropriate intervention at an earlier level is required in order to avoid costly rehabilitation programs. A fortiori, in developing countries, early childhood formal education makes little sense without a strong care component, and if possible, in parallel with women's education, income generation, infrastructure and community development.

The neglect of broader educational aims and finalities: The great attraction of the primary school is that, ideally, it transmits two skills - literacy and numeracy - essential for industrializing societies. The Jomtien declaration insists, also, on the importance of life and learning skills, for child development is much larger than literacy and numeracy, and not just a preparation for school or the workforce. Wider and more important issues are at stake, in particular, the extent to which education nurtures community awareness, cooperative action and the ability to solve the problems with which the local community is faced. No doubt other parameters enter when trying to resolve major problems such as pollution, energy waste, exploitation, overpopulation, lack of community employment and migration but there can be little doubt that the placing of life skills instruction and family education at the center of the education curriculum can raise awareness and lead toward solutions.

6 Conclusion

The Jomtien World Conference on Education for All has rightly called attention to better management of primary education systems. There are good reasons to believe, however, that in many - perhaps most - situations, investment in early childhood development and support for decentralized, nonformal, education initiatives towards parents may be essential conditions for attaining its key goals.

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PART ONE

CROSS-CULTURAL PERSPECTIVES ON DEVELOPMENT

INTERACTION OF CONTEXT WITH DEVELOPMENT

THEORETICAL CONSTRUCTS FOR THE DESIGN OF EARLY CHILDHOOD EDUCATION PROGRAMS

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1 Introduction

> "There is nothing so practical as a good theory"
> (Kurt Lewin, cited by McGuire, 1973, p. 447)

Hoping to support this proposition, I shall attempt in this paper to identify theoretical constructs that are relevant to the design of programs of early childhood intervention and group them into a rough taxonomy with respect to their characterization of context, of development and of the modes of interaction between the developing individual and the context. This approach has the attraction of specifying key variables for the design of an intervention program that can also be used to focus the attention of program personnel during their training. It does, however, run the risk of appearing to simplify the theories from which these constructs are derived and opens me to the charge of eclecticism.

I run these twin risks willingly, because I am convinced that intervention programs need to make their techniques intelligible both to the various personnel deployed in their implementation and to the people for whose children's welfare they are intended. If explaining the significance of a particular theoretical construct to either of these audiences requires selective simplification of the theory, that may be a necessary price to pay for its practical validation. Others may argue that this is not essential. After all, the scientific bases of modern medical and engineering technology are seldom fully understood by the majority of those who benefit from their application. In my view, however, this analogy is false, since psychological intervention programs (be they educational or therapeutic) must, for both epistemological and ethical reasons, rely on the conscious, voluntary participation of their recipients in the technical details of the program (Serpell, 1990).

The expert paradigm that informs certain clinical interventions with special populations extracts the patient from her normal social context and replaces it with an artificial one, structured in such a way as to optimize the conditions for the amelioration of the patient's condition. Whether this is ever a legitimate strategy for the enhancement of a child's developmental opportunities need not concern us here: it is clearly both impracticable and politically unacceptable as a method for the enhancement of developmental opportunities in a large section of society. This goal can only realistically be addressed by working with and through the children's existing families. Thus, as Eldering (1990/1991, p.58) has noted, "focusing on the effects of a program on children and at the same time blaming the parents for the educational arrears of their children, without studying how to change attitudes and parental behavior, reflects a short-sighted view in policy in research and public debate."

2 Context as external stimulation

The taxonomy of theoretical conceptualizations presented in Table 1 first divides the field broadly into those theories that treat context as a form of external stimulation and those that treat it as an incorporating system. Each model also postulates particular dimensions along which human cognition develops and advances a corresponding formulation of the interaction between cognitive development and its context. A classic interpretation in the first of these traditions is Waddington's metaphor of the landscape which the developing organism must navigate in order to achieve development as progress (McCall, 1981). This image has given rise to the notion of canalization, where biological constraints in certain phases of ontogenesis, are said, like the banks of a canal in which the rolling-ball organism could get trapped, to restrict the range of behavioral changes that can be induced by contextual variation. This and other spatial elaborations of the landscape metaphor, are both powerful interpretive constructs and also strangely unidirectional, in that the organism merely rolls over the terrain with its direction of progress getting steered by the inclines, bumps and gullies, without any kind of interactional negotiation.

Table 1 Theoretical models and metaphors

Nature of context	Modes of interaction	Dimensions of development
External stimulation		
reinforcement contingencies	shaping	fit
	imitation	mastery
information terrain, objects, behavior of others (speech, etc.)	affordance	differentiation
physical world (laws of natural science, social conventions, laws, etc.)	exploration	adaptation
	representation schematization	comprehension
	construction	equilibration
	encoding	reorganization efficiency automatization metacognition
Incorporating system of social activity	socialization	integration
routines	guided participation	repertoire expansion
practices (x technology)	apprenticeship	role change legitimation centralization
institutions		incorporation
of cultural meaning		
symbolism	internalization	competence
language (grammar, lexicon, pragmatics)	intersubjectivity negotiation co-construction discourse	participatory enculturation, appropriation
technology	goal formation	appropriation

Behaviorists in the tradition of Skinner (1953) have focused in particular on the concept of reinforcement contingencies, that are said to influence the pattern of development through an interactive process sometimes called shaping the organism's behavior, resulting in a fit between behavioral dispositions and the demands of the environment. An elaboration of this

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perspective by Bandura (1977) adds imitation to the list of interactive processes, and generates the concept of mastery of target behaviors or skills as a developmental outcome. The organism according to these closely allied perspectives, emits behavior spontaneously and over the course of development comes increasingly under the control of external contingencies. Interpretations of children's development with these biological and behaviorist models tend to eschew the notion of intentionality. This simplifying assumption is sometimes acceptable to caregivers of very young, or seriously impaired, children, but tends to be counter-intuitive for those who are able to communicate verbally with the child as a person.

According to James Gibson (1979) and Eleanor Gibson (1982), context is characterized by information that is apprehended by the organism in terms of affordances, stimulus features that are functionally related to various aspects of the organism's behavioral repertoire. Long before they learn analytically to describe the appearances of objects in terms of shape, color and size, children perceive an object in terms of what potential actions it affords, such as grasping it, crawling under it, walking over it, etc. Development proceeds by increasing sensitivity to this information in the environment regarding the interactive potential of objects, terrain, behavior of others (including speech, etc.). These phenomena are initially apprehended in a relatively global manner, and through development become increasingly differentiated.

Perhaps the most influential of all developmental theories has been Piaget's (1971) genetic epistemology. The context of development in Piaget's theory is principally conceived as a physical world (governed by laws of natural science) with which the organism interacts by exploration resulting in progressively fine-tuned adaptation, although it also includes a social world governed by societal conventions and laws. A particularly important theoretical construct in Piaget's theory that sets it apart from the others discussed so far is the interactive process called representation, that first appears in the course of normal development towards the end of the first year of life. Representation generates a new layer of cognition beyond that which is characterized by sensori-motor interaction with the physical world, and this makes possible more abstract and powerful forms of comprehension, including those mediated through language. Neisser (1976) has advanced a synthesis of the ideas of Gibson and Piaget, focusing on the construct of a schema which plays an important part in Piaget's account of how representation occurs as well as featuring prominently in cognitive theories of memory. A schema is a preliminary, imprecise, selective analogue to a phenomenon in the real world, and Neisser suggests that it serves to guide the organism's exploratory search of the physical world which generates information that must eventually be incorporated in a revision of the schema before it is used again in the 'perceptual cycle' to guide further exploration.

Whereas Gibson stressed the process of differentiation as the key to increasing understanding of the world, Piaget argued that the child must construct a representation and then test it against reality. This testing forces the child to make adjustments to her models of the world, which in turn imply further adjustments to other parts of the child's overall understanding. A higher order process driving development is thus termed equilibration, which generates increasingly abstract and general explanatory constructs to cover consistently all aspects of the child's experience.

The most recent cohort of developmental theories to focus primarily on a view of context as external stimulation from the physical world are known as Information Processing theories (Siegler, 1991). The basic interactive process in these theories is termed encoding, a computer-processing metaphor for the topic addressed by the expressions representation and schematization discussed above. The developmental outcome is some form of reorganization of the information stored in a coded form in the mind (or the brain). Developmental progress is construed in terms of the efficiency with which the mental organization permits the child to process information. One appealing account of how such efficiency is achieved is termed automatization (Sternberg, 1984), with a complex series of cognitive operations becoming subsumed under a routine that can be performed as a whole without reflection. Another hypothesis about developmental progress that has featured prominently in the information processing tradition is that it involves increasing amounts of metacognitive awareness and skill, with the child becoming able to think and talk about her own mental processes such as attention and memory and to plan strategically how to optimize their deployment.

A vast body of detailed, empirical research on cognitive development has been conducted within one or other of the theoretical frameworks outlined above. Yet the applicability of its findings to intervention programs working with and through children's families is seriously constrained by the artificiality of the social and/or physical arrangements under which the research was undertaken. Until quite recently, many laboratories achieved their control over extraneous variables by recourse to procedures that are ecologically unrepresentative for most of the world's families (LCHC, 1983).

3 Context as an incorporating system

Another whole family of theories has been advanced, partly in reaction to this problem of ecological validity, and partly to correct an excessive emphasis on properties of the physical world as defining the context of child development. These theories conceptualize the context of child development as an incorporating system of social activity (Bronfenbrenner, 1979). The interaction between the organism and context is construed as a process of socialization, whose developmental outcome is some form of integration into the social system. The structure of the context according to such theories comprises socio-cultural routines, practices, and institutions. Routines include recurrent ways of interacting for social purposes, such as greeting, scolding, or testing a child's incipient command of language (Peters & Boggs, 1986). The developing child may be said to interact with this contextual structure through the process of guided participation (Rogoff, 1990), resulting in a gradual expansion of her behavioral repertoire. At a somewhat larger scale of analysis, more immediately accessible to an indigenous informant, a social system is structured in terms of culturally specific practices, in which the developing child participates in ways that are both legitimate and yet peripheral (Lave & Wenger, 1992). One way in which the changing form of participation can be construed as developmental has been termed apprenticeship (Rogoff, 1990). This theoretical perspective focuses less on the elaboration of the child's cognitive repertoire than on her changing social role, along such dimensions as legitimation and centralization.

The practice perspective also acknowledges the socially organized, and historically accumulated structure of technology. Thus Scribner and Cole (1981) argue that the acquisition of literacy cannot be understood exclusively in terms of perceptual and linguistic processes mediating the 'extraction of meaning from print' (Gibson & Levin, 1975). It also requires an account of the social purposes for which the practices of writing and reading are undertaken by literate members of the society into which the aspiring initiate is being socialized. Even in a single society, becoming literate can entail quite different patterns of skill depending on the particular form of the practice. This notion has been elaborated in a productive way for sociocultural variations in the kinds of emergent literacy that children bring to school from their home environments in the USA (Heath, 1983). At a still higher-order level, social practices are organized by institutional factors, and the developmental outcome of social participation may be construed as incorporation into the life of the institutions. Thus in most contemporary, industrialized societies, the course of child development includes incorporation into the structure of a succession of educational institutions as a student at various levels of schooling. From this perspective the individual's developmental status is indexed by such institutional markers as age-for-grade, completion of the mandated curriculum (versus 'dropping out'), or the type and level of post-basic educational credentials attained (e.g. technical/academic; 2-year/4-year college degree; master's/doctoral degree; etc.). The relatively unschooled person is thus socially stigmatized as developmentally incomplete (Serpell, 1993a).

An influential formulation that sets out to integrate the notion of context of child development as a social system with conceptions in terms of external stimulation is Super and Harkness's (1986) concept of the developmental niche: an integrated eco-socio-cultural system to which a child is expected to adapt in the course of development. They distinguish three components of the niche: (1) "the physical and social settings in which the child lives"; (2) "customs of child care and child rearing" (which would feature in the present taxonomy as cultural practices); and "the psychology of the caretakers", or ethnotheories of caregiving (Serpell et al. 1992; Harkness & Super, 1992), that is to say the implicit theoretical ideas that inform the decisions made by those responsible for the care and upbringing of children in a given sociocultural group.

This last component illustrates a distinct sub-theme among the theoretical perspectives on context as an incorporating system, where the focus is on the system of cultural meanings relating to child development shared among the participants in a sociocultural system. The idea that culture is best understood as a meaning-system has been elaborated in a variety of forms (D'Andrade, 1984; Quinn & Holland, 1987). One of the consequences is that the structure of the context of child development includes the symbolism distinctive to a particular culture. One version of cultural psychology construes all human action as informed by intentions and directed at mental representations (Shweder, 1990). It is these representations that constitute the forms of life in which humans participate, and through their participation both they as agents and the forms of life are constantly undergoing change. Representations are also embodied in various, relatively enduring elements of culture that are passed on from one generation to the next (institutions, practices, artifacts, technologies, artforms, texts and modes of discourse). The interaction of the developing child with this system of meanings has been conceptualized as internalization (Vygotsky, 1978) eventuating in competence, and as negotiation (Ochs, 1990), or co-construction (Valsiner, 1991) leading to participatory enculturation.

In the domain of language, an influential account of the earliest stages centers on the concept of intersubjectivity (Trevarthen, 1980; Bruner, 1990) that lays the groundwork, even before the ontogenetic appearance of speech for the pragmatics of discourse, through which so much of human culture is appropriated.

Conceiving the outcome of development as appropriation combines the notion of intergenerational transmission with that of active participation by the child in her own enculturation, and also highlights the subjective sense of ownership that undergirds claims of authenticity by cultural insiders (Serpell, 1993b). In the case of mathematics, the process through which this appropriation of an inherited technology is achieved has been described as the emergence of goals in the course of participation in practices and the construction of strategies for attaining those goals involving the adaptation of pre-existing form-function relationships (Saxe, 1991). To the extent that the child perceives the goals of a given task as factitious and/or imposed by others, rather than emerging from her own spontaneous activity, the educational process may be regarded as inauthentic and unlikely to engage intrinsic motivation. This argument lies at the root of a growing movement in educational circles to ground education in activities that resonate with the cultural meaning-system of the child's home environment (Tharp, 1989).

4 Language development and emergent literacy

My account of theoretical perspectives on early cognitive development would be incomplete without acknowledgement of the elaborate theoretical literature on language development and learning to read. Detailed consideration of these topics will be provided by Catherine Snow, Ludo Verhoeven and Paul Leseman in other chapters of this volume. I will therefore confine my remarks to a few broad generalizations. The focus of theoretical research on early language development shifted in the late 1970s away from the overwhelming preoccupation of the preceding decade with the acquisition of syntactic competence toward the semiotic and pragmatic dimensions of linguistic competence. In less technical (and less precise) terms, theorists began to devote more attention to how children learn to express meaning and communicate through their choice of words, and less to how they master the intricate rules that determine whether an utterance is regarded as grammatically correct.

One important source of complexity in the analysis of context as an incorporating system of cultural meaning arises from the sociolinguistic phenomena of multilingualism. In many societies around the world, children routinely grow up learning more than one distinct variety of language within the home setting. When two or more linguistic varieties coexist within a single, integrated social system, certain patterns of organization regularly recur. At the societal level, some form of stratification tends to occur among various domains of discourse with a particular variety preferred for each domain. At the level of the individual, selection of which variety to deploy is governed by a complex set of criteria that include not only the presumed linguistic competence of the persons addressed but also the social connotations of using a particular variety for a particular topic in a particular context (Gumperz, 1982; Ochs, 1990). Moreover, this patterning of code-selection is closely related to the subtle differentiation of genres and registers of speech that have been documented in so-called monolinguistic speech communities (Halliday, 1975). One area of emerging consensus is that the particularities of social organization under which a child encounters different varieties of language can exercise a crucial influence on the success with which she or he masters each of them (Riegel & Freedle, 1976).

A valuable line of theory for relating pre-literate aspects of linguistic competence to the early stages of acquisition of literacy centers on the capacity to construct narrative. Peggy Miller and her colleagues (1987, 1990) have documented a variety of ways in which adult caregivers communicate cultural norms to young children through narrative, and Heath (1983) has argued that subcultural variations in the preferred forms of narrative have a major impact on the relative ease with which they cope with the demands of the early school curriculum. In contemporary, middle-class, Western societies, this cognitive resource is instantiated in a widespread cultural practice of adults reading storybooks to and with their children, beginning well before they are enrolled in school. Considerable research has been addressed to the developmental potential of this practice, as an opportunity for guided participation in a routine and/or co-constructive enculturation, generating expansion of the child's behavioral repertoire and competence in the symbolic system of the culture, as well as a form of specific orientation towards the demands of a literate school curriculum (Sulzby & Teale, 1991; Wells, 1986).

5 Instructional applications

In the field of emergent literacy, the theoretical ideas of Vygotsky (1978) have been influential not only at the level of conceptualizing the historical and sociocultural parameters of literacy as a cultural resource, but also for the micro-level analysis of instructional processes. The zone of proximal development (zpd, or zoped) is defined as the range of behaviors in a developmental sequence which lie within the competence of an individual to perform with assistance, and which are likely soon to come within the individual's competence for unassisted performance. One very general instructional principle that has been derived from the concept of the zoped, is the need for the teacher to adjust her instructional interventions dynamically to the evolving competence of each individual learner. Rather than categorizing the child's existing knowledge and skills and comparing them to a pre-determined set of curricular outcomes, the most effective mode of instruction will involve 'in-flight' decision-making about the optimal match between the learner's latest performance and the teacher's next intervention.

Tharp and Gallimore (1988) have articulated a number of ways in which a teacher can be prepared for this demanding pattern of individualized and contextually-sensitive instruction. The general approach is entitled instructional conversation, in which the teacher seeks to weave new information into the student's existing mental structures. A concrete example is the experience-text-relationship strategy for teaching reading: the teacher first assists the child to prepare her existing relevant systems of understanding grounded in prior experience, next explains the structure of the information in the text, and then focuses on bringing the child's prior experience and the present text into a relationship, weaving them into the meaning of the ongoing educational discourse.

Other strategic constructs that have featured in the literature emanating from this theoretical perspective are scaffolding (Wood, Bruner & Ross, 1976) and prolepsis (Stone, 1993), techniques designed to support and extend the child's cognitive activity within her zone of proximal development.

In the preschool period, Klein and her colleagues (Klein & Alony, 1991), have articulated a mediational approach to quality teaching, that involves five serially organized phases: focusing a reciprocal awareness of intentionality; arousing an affective appreciation of meaning; expanding the child's cognitive awareness beyond the satisfaction of immediate needs; rewarding specific components of the child's behavior with a view to generating feelings of competence; and mediated regulation, designed to establish a correspondence between the child's conscious interests and the requirements of a task.

In all these applications of developmental psychology to education, the focus is on pedagogical process rather than on curriculum structure - the sequence of steps into which instruction is segmented is organized in terms of how a learner can grow, rather than how a preconceived body of information can be transmitted. This may well represent the key contribution of developmental psychology to the design of early intervention programs.

6 Theoretical focus in the design of intervention programs

In the preceding paragraphs, I have sketched a number of different theoretical perspectives on the context of human development, the dimensions along which we should evaluate the outcomes of development, and the processes of interaction between the developing child and context that generate development. Early childhood intervention programs are an attempt to modify the context with a view to enhancing the course of development. Thus theory should in principle be helpful in deciding what kind of contextual modification is most appropriate for achieving the desired developmental outcomes. In practice, however, any contemporary intervention program that goes to scale (Myers, 1992) is almost bound to touch base with all the considerations motivating the divergence among the various theoretical perspectives I have outlined above. This is partly because the task of educational programming itself forces the system to acknowledge them, and partly because programs become explicitly accountable to such a variety of audiences, whose different perspectives tend to complement one another. Free of the rigor of scientific discourse, many program managers tend to be somewhat eclectic with respect to theory. Nevertheless, at least for the sake of argument, I shall spell out what seem to me to be some of the major implications of those theoretical propositions with which I agree for optimizing the design of an actual early childhood intervention program. And I shall illustrate my argument with reference to the four exemplary programs presented elsewhere in this volume: the Success for All program in the USA (SFA, see chapter by Slavin and Madden); the Turkish Early Enrichment Project (TEEP, see chapters by Kağıtçıbaşı; and Eldering and Vedder); Proyecto Padres e Hijos in Chile (PPH, see chapter by Filp and Valdes); and the Integrated Child Development Services in India (ICDS, see chapter by Muralidharan and Kaul).

To some extent the ordering of ideas from the top of Table 1 to the bottom represents for me a cumulative progression of insights: each successive model transcends some of the limitations of its predecessor, while incorporating some of its strengths. Piagetian and Information Processing theories describe the complex and constructive nature of representation in ways that enrich our understanding of cognitive development beyond the scope of conditioning and differentiation theories. Theories of context as a system incorporating the developing individual capture a wider range of environmental processes than those identified in theories of context as external stimulation. By doing so, they do not necessarily invalidate micro-level accounts of how the developing child explores and represents the world, but they heighten our awareness of the sociocultural and historical parameters that constrain and complicate the long-term consequences of any single, planned intervention. Finally, theories that focus on the system of meanings woven into the sociocultural context link back with the constructive nature of representation to make it clear that the system is open to deliberate change by its participants, albeit only gradually, and often with great difficulty.

Turning to the case studies of actual intervention programs, let us first consider their theoretical rationales at the micro-analytic level summarized in the top half of Table 1. The insights of Piagetian, Information Processing, and neo-Vygotskyan theories about the nature of cognitive processing have been incompletely assimilated into the pedagogical practices of many schools and preschools. For instance, the evaluation and impact studies of ICDS cited by Muralidharan and Kaul focused on mastery of skills that are firmly grounded in the school curriculum (concrete examples cited are 'rote counting,' 'color identification and naming,' 'able to hold the crayon,' 'able to color a circle') and on behavioral fit ('school adjustment'). However the national government's 1992 Plan of Action on Early Childhood Care and Education, under which further expansion of the ICDS is envisaged, focuses on a wider range of dimensions of development, that includes the notions of comprehension, repertoire expansion, and role change: "child-centered and process-oriented activities aimed to foster joy and curiosity in children, promote language and cognitive skills, develop creativity and confidence and promote muscular development."

In the case of SFA, the main criteria for evaluation presented by Slavin and Madden are 'reading performance outcomes' on standardized tests, reflecting the focus of the program on 'direct instruction.' The content of the reading program, however, includes not only teaching for mastery of letter sounds, decoding and vocabulary, but also participatory opportunities for cooperative learning designed to expand the child's repertoire of meta-cognitive strategies such as prediction and summarization, and fostering the appropriation of a cultural meaning-system through engagement in joint storybook reading and story-related writing. These higher-order aspects of emergent literacy may well be more predictive of the longer-term significance of formal education in the children's lives than the more tangible indices of scholastic achievement emphasized in most formal systems of school accountability.

The 'cognitive training' component of TEEP was the Home intervention program for Preschool Youngsters (HIPPY, described by Eldering and Vedder in this volume, in the context of the Netherlands application). Explicit procedures are taught via programmed instruction to the children's mothers, to whom responsibility is thus delegated for implementing a pre-structured pattern of stimulation of the child. The emphasis in training the mothers is on particular behaviors to be carried out with their child, rather than on the nature of the developmental processes these activities are designed to promote. Consistent with this behavioral perspective, Kağıtçıbaşı's evaluation of the TEEP stresses academic performance outcomes, with particular attention to persistence with schooling. Turkey shares with many parts of the third world the phenomenon of a large proportion of students leaving school with only a few years of schooling, a topic that is beset with economic and political complexities. Sadly, many students who withdraw prematurely from schools in these societies do so believing that they have failed due to inadequacies of their own intellect, although there are good reasons to believe that their cognitive mismatch with the curriculum is confined to relatively specific task demands (Serpell, 1993).

In PPH, child development is mainly conceptualized in terms of the self, invoking Erickson's theory, which I have not discussed, but Piaget's theory is acknowledged as relevant to the design of activities that are promoted through exercises laid out in a series of booklets. One of the challenges for theoretical integration is how the design of these micro-level activities relates to the sociocultural focus of the intervention. Mothers reported both in Chile and in Turkey that the concrete teaching materials made available to them by the program served as important symbols of their participation in a socially valued activity. How much of the theoretical rationale of the intervention filtered in this way into local conceptualizations of child development and socialization remains a rich field for evaluative research on the wider cultural consequences of such programs.

Since the context of child development includes adult humans, to modify that context necessarily involves change in adult behavior. A program based on theory that construes the key aspects of context in terms of external stimulation may interpret this requirement of changes in adult behavior in administrative procedural terms. The program specifies a plan of activity that is delegated for implementation to strategically placed adults such as a preschool teacher or parent. If, however, the context is construed as a system with its own internal principles of organization, it becomes less plausible to suppose that a pre-conceived plan of activity will be implemented by adult members of that system as a result of a simple administrative act of delegation. The 'implementers' need to be recruited as voluntary participants in the reorganization of their community - adopting new practices, establishing new institutions, and in the process generating a new system of meanings to inform, justify, and sustain their collective changes in behavior.

This dimension of context is more explicitly acknowledged in the accounts of PPH and TEEP than in the accounts of ICDS, SFA and the Netherlands application of HIPPY. The "holistic view of the child and the mother" favored by the ICDS involves recognizing "the importance of maternal well-being for the healthy development of the children," but no intrinsic connection is articulated between the mother's beliefs and intentions and the developmental agenda set for the child. "Community participation and involvement before the scheme is launched" is advocated as a means of ensuring local material support, rather than a philosophically essential condition for the viability of the enterprise of intervention. In SFA, a Family Support Team seeks "to make families comfortable in the school", and "trains the parents to fulfill numerous volunteer roles within the school." But the examples cited are relatively peripheral to the educational process: "providing a listening ear to emerging readers", and "helping in the school cafeteria."

In the Netherlands application of HIPPY, periodic group meetings were held to "enable mothers to share their experience with the program and their problems, to learn the experience of others, and to internalize through active discussion some of the program's objectives." In TEEP, this component of the intervention was conceived as 'mother enrichment.' Group discussion sessions were aimed at "empowerment of the mothers in coping with problems and attending to their children's needs," through a combination of reinforcing indigenous cultural values such as 'close knit family ties' and 'relatedness values,' and promoting a new element of child-rearing, namely the cultivation of autonomy. Many of the attitudinal changes reported as outcomes seem attributable to a set of systemic interdependencies among parental and child values, aspirations, and practices. Parents' expectations of educational attainment for their child became more ambitious; children stayed on in school longer and perceived their mothers as having been more supportive; and mothers looked more favorably on their adolescent child's social integration.

Both Kağıtçıbaşı and Slavin underline the issue of academic motivation, and argue that a major contribution of their programs is to enhance students' and their families' commitment to the agenda of schooling. In this respect their focus may be regarded as being on socialization for integration and incorporation into the cultural institution of formal education. Paradoxically most of the family adults to whom these programs assign responsibility for implementing their hands-on activities have achieved little formal education themselves. In order to engage them in the systematic recruitment of the developing child into more central participation in this pattern of social activity, what seems to be required theoretically is a process of participatory enculturation of the parents into a meaning-system shared with the teachers in the schools.

The most explicit acknowledgement of this programmatic challenge is made by PPH, which Filp and Valdes describe as seeking "to create the space in which parents make explicit their knowledge, believe in their parenting ability and perceive new ways of interacting with their children." The key to creating this space is "an encounter amongst adults" designed to promote "the exchange of personal experiences, thoughts and feelings." Strikingly, these authors report that the "egalitarian relationships" necessary for promoting this participatory dimension of the program were generally easier to establish for program personnel without a professional background, since professionals had difficulty throwing off "their traditional way of relating to mothers and fathers from poor sectors, in which they tend to lecture or give solutions."

The differences of focus that I have cited among the four exemplary programs partly reflect differences in their historical evolution, giving rise to variations in the order of priorities among the various levels at which operational issues are formulated. For instance, each of the programs eventually aspires to influence a large number of children at many different sites. But the massive scale of ICDS was an initial premise, whereas 'massification' is posed as a problem to be explicitly addressed by PPH now that the national political climate has changed in such a way as to render the program's objectives more attractive to the government.

Each of the theoretical models that I have discussed is intelligible and coherent, and can be supported with a body of empirical evidence. Each is selective, and therefore presents an incomplete account of child development in context. The relative plausibility of different theories is only partly a function of the balance of evidence. It also reflects the degree to which each theory's central metaphors correspond with pre-theoretical assumptions of the audience to whom it is addressed, and resonate with their cultural pre-occupations (Serpell, 1990). Some laboratory scientists are currently impressed by the biological constraints on human development, and point to genetic engineering as an emergent source of new intervention technology. Many economic development theorists are preoccupied with external constraints imposed by variations in the material environment, and emphasize the elimination of environmental deprivation as the key to intervention strategy. Yet many case studies of outstandingly perceptive, creative, and compassionate persons who developed against a background of very adverse conditions attest to the extraordinary plasticity and resilience of human development. Moreover both the genetic and economic perspectives tend to pay insufficient attention to the essential purposiveness of human behavior.

Educational intervention is rooted in philosophical optimism about the capacity of humans to ameliorate their condition. In order to construct an agenda responsive to this perspective, theoretical accounts of developmental context need to focus on processes of social participation. Coordination of many people in a joint endeavor calls for a set of common principles. If these are conceived mechanically and imposed from above, individual agents tend to become alienated from their roles in the system. Thus, in my view, the co-construction of goals in terms of a system of shared meanings provides an optimal entry-point for the design of ameliorative programs of human development.

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ORIENTATIONS ON CULTURE

SOME COMMENTS ON INTERVENTION PROGRAMS

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The world of a child is complex. Barker and Wright (1951) followed a seven year old boy in a small mid-Western American community for one day from the time he woke up until he went to sleep. They found that their subject participated in hundreds of different activities over a range of settings with scores of objects and with dozens of persons. Getting around in one's world is a baffling achievement, which requires a variety of social skills, and a whole arsenal of factual knowledge.

The impact of what popularly is called 'culture' on the skills and knowledge of the 7-year old is evident. Although there seems to be no systematic study in any other society matching that of Barker and Wright, this is obvious after a brief reflection on the life of a child in a hunting-gathering society like that of the Biaka Pygmies, or in an agricultural society like that of the neighboring Bangandu (cf. Van de Koppel, 1983). The skills and items of knowledge required by these societies in many respects will not even remotely look like those in Mid-West America. This point is emphasized to avoid the impression later on that the cultural context of development would be unimportant. The thesis of this chapter is that culture is very important, but perhaps in a different way than often believed and that this has certain consequences for the construction and cross-cultural transfer of intervention programs.

In the first part of this chapter three orientations on culture are summarized and some of the strong and weak points of each are mentioned. The orientation most widely found in cross-cultural psychology, i.e. a moderate form of universalism, is somewhat further elaborated. The most important argument is that cross-cultural differences in behavior are of a kaleidoscopic complexity and cannot be reduced to a few psychological dimensions or categories. In the last part some consequences of this insight are mentioned for the kind of intervention program that is needed to bring about behavior change and for the transfer of existing programs to other societies and groups.

3 Views on culture-behavior interactions

In cross-cultural psychology, as everywhere else in the behavioral and social sciences there is a wide range of opinions on the nature of the relationship between environmental influences and behavior repertoire. Berry et al. (1992) make a distinction between three orientations, viz. cultural relativism, psychological universalism, and behavioral absolutism. These can serve also to classify the main perspectives on the relationship between environmental influences (including the natural as well as the socio-cultural environment) and developmental outcomes.

Cultural relativism emphasizes that behavior can be understood only in the context of the culture in which it occurs. Behavior should not be studied and interpreted apart from its cultural context. In its ultimate consequence relativism can lead to the rejection for non-Western societies of the current methods and theories of psychology, because they are Western cultural products. Although predominantly an anthropological orientation, relativistic notions are popular among those who plead for the indigenization of psychology. Relativists tend to refrain from cross-cultural comparisons, since these assume invariance across cultures of the dimensions on which comparisons are made. Most intervention programs specify culture-common (if not western-industrialized) goals and it is not surprising that there seem to be no intervention programs based on a purely relativistic orientation.

Absolutism, or behavioral universalism, presumes that, with minor exceptions, behavior from all cultural contexts can be interpreted in terms of common theoretical concepts and that the same methods should be valid in all cultures. As a consequence, psychological principles underlying intervention programs and evaluation instruments should be applicable everywhere. As a rule existing instruments and treatments require only minor adaptations in content when they are to be used in non-Western societies. Classical intervention programs, teaching school subjects isolated from context, can be said to have absolutist underpinnings.

Psychological universalism, the third orientation to cross-cultural differences distinguished by Berry et al. starts from the working assumption that all basic psychological traits and processes can be found everywhere. At the same time, the manifestations of these invariant processes can differ substantially across cultures. In as much as psychological concepts and theories are derived at a particular time and cultural location, they are likely to be biased and in need of revision on the basis of information from a broader range of cultures. This holds also for psychological measurement instruments and for intervention programs, because they cannot be constructed without the use of behavioral manifestations that are understandable within the cultural context in which they are to be applied. In psychological universalism comparative studies are seen as methodologically difficult and the interpretation of observed differences in behavior repertoire as problematic. Instruments and treatments are likely to be culturally biased, and it may even be necessary to use quite different operationalizations across cultures to capture the same trait or process. However, the basic psychological invariance of humans in all cultures can form the basis for the construction of intervention programs, as long as in their actual realization the constructor and the user are properly informed about the cultural context of the children to whom these programs are applied.

The three orientations are paradigmatic perspectives rather than testable theories. The choice between them is not without consequences for the construction and implementation of intervention programs, but it can be argued that they should not be seen as mutually exclusive and opposite paradigms, but as compatible and perhaps complementary orientations (Poortinga, 1993a, 1993b). This allows that questions be asked about their relative advantages and disadvantages.

The strong point of behavioral absolutism is the emphasis on strict identity of psychological processes. Supportive empirical evidence can be found in studies of early-mother child interactions (e.g. Keller, Schölmerich & Eibl-Eibesfeldt, 1988; Papousek & Papousek, 1991; Bornstein, 1991) in which not only young babies show much similarities in their behavior patterns, but also the parents. For example, their manner of speech, conveniently called 'motherese,' is found to be characterized by universally more or less invariant features. The disadvantage of behavioral absolutism, at least in the eyes of those with another orientation, is the interpretation at face value of observed cultural differences. For example, test scores tend to be interpreted in much the same way, independent of the cultural background of the subjects who obtained them. As a rule subjects from societies with low formal schooling and from minority groups do less well (in terms of performance level or social desirability of the responses) than subjects with more exposure to the cultural context of the test authors. For this reason an absolutist orientation becomes easily associated with 'deficit' notions, such as 'culture of poverty' (cf. Howard & Scott, 1981) and race differences in intelligence (e.g. Jensen, 1980).

The strong and weak points of cultural relativism are quite the opposite of those mentioned for absolutism. Relativists will not easily fall in the trap of an insufficient recognition of the influence of cultural context. The focus on social context and subjective reality as experienced by members of a society has given impetus to the study of parental ethnotheories and of differences in the expectations and demands that children have to meet. The age at which children are given responsibilities and are assigned economically relevant tasks differs greatly especially between agricultural and industrialized societies (cf. Segall et al., 1990 for a summary). On the other hand, the obvious similarities in behavior patterns are given scant attention by relativists. Such similarities are taken to point to equality of social conditions (or perhaps to cultural diffusion), rather than to cross-cultural invariance of psychological processes.

The major advantage of psychological universalism is that the extent of cultural variation is an empirical issue and not predetermined by a priori viewpoints. As a middle of the road position universalism may well be less open to criticism than the more extreme positions of relativism and absolutism, but it can incorporate empirical evidence from both these perspectives. The most problematic aspect of universalism is that it offers (as yet) little theoretical rationale for the specification of cultural variation and psychological invariance.

Berry et al. implicitly question whether such a specification is even theoretically possible when they argue that the commonly found notion about close relationships (one-to-one correspondence) between cultural factors and behavior patterns need not be correct. Human behavior has a high degree of plasticity. This implies that a choice can be made between alternative courses of action. Potentially individuals have a large set of alternative actions at their disposal in almost any situation, but the range of responses actually observed is far more limited. Apparently, there are constraints that limit the set of alternatives actually available to a person, including cultural constraints, such as norms, beliefs and conventions. However, these constraints are to some extent arbitrary and thus escape systematic explanation. This is the case for individuals within a culture, but even more so when one seeks to explain differences in behavior between cultural populations (Poortinga, 1992).

Within a universalistic orientation two further questions are of particular concern. First there is the problem at which level of inclusiveness cross-cultural differences can be postulated most fruitfully (cf. Pettigrew & Van de Vijver, 1991). In respect of 'intelligence,' for example, explanations of cross-cultural differences can be found at many levels of comprehensiveness, ranging from 'general intelligence' via 'stage theories' and theories on 'styles' to highly specific 'skills.' There seems to be a long-term trend, especially noticeable in the areas of perception and cognition, to move from high-level explanations (Easterners think differently from Westerners, or literates think differently from illiterates) to low level, less encompassing explanations. For example, earlier speculation about the influence of literacy on mode of (abstract) thinking was disconfirmed in empirical investigations where Western type schooling and the art of reading and writing could be disentangled (Cole & Scribner, 1981; Berry & Bennett, 1991). Cole and Scribner could show that subjects who were literate in Vai also tended to have a good performance on tasks tapping skills needed for reading and writing in the Vai script, but not on cognitive tasks in general. In other words, the mere fact of being literate or illiterate appears to have few consequences for cognitive performance.

Not only in cognition, but also in the sphere of social behavior there is evidence about limited generalization. Specific to a class of situations are so-called conventions, i.e., generally accepted, often implicit notions about what is appropriate in social interactions or a field of activity. It is characteristic of many cross-cultural differences in conventions that they have no systematic relationship with any psychological variable. A clear case are traffic rules. Britishers and Europeans living on the continent differ very consistently in keeping to the left side or the right side of the road. At the same time, the generalizability of this pattern to other aspects of behavior is extremely limited, if not entirely absent. Moreover, the convention is readily reversible, even after years of practice, as demonstrated by drivers who cross the Channel. Going back to the study mentioned in the introduction, the question can be raised how much of the extensive range of activities in the life of the 7-year old, from a cross-cultural perspective is best interpreted in terms of specific skills and conventions.

The second question, not unrelated to the first, is to what extent cross-cultural differences can be explained as a direct consequence of prevailing external conditions and to what extent it is necessary to postulate internal dispositions. It is almost axiomatic in the literature that differences are manifestations of differences in internalized values, norms, beliefs, or attitudes. Especially in the Culture-and-Personality school, rooted in psychodynamic theory, the internalization through socialization of the economic mode of existence was developed into an important dogma (e.g. Kardiner & Linton, 1945; Levine, 1973). However, in many instances a more parsimonious explanation is possible by postulating a direct link between the actions of persons and the external circumstances they are living in. Research on Locus of Control provides an example. A distinction is made between external control (when success in life is seen as due to chance or powers outside oneself), and internal control (when success is attributed to one's own abilities and skills). Both within and across societies it has been repeatedly found that results correspond with the actual control that people can exert on their own lives; the less educated, minority groups and samples from countries with low GNP tend towards low internal control (Dyal, 1984). Consequently, a simple learning paradigm, postulating a causal connection between current environmental conditions and a person's reactions can provide a sufficiently adequate account of most cross-cultural differences.

The questions raised in the previous paragraphs are particularly pertinent when they are considered with reference to cross-cultural differences in individual development. The idea that conditions in the early years of life, especially adverse conditions, have broad, permanent and more or less irreversible long-term effects is central to many theories. The evidence is strong as far as physical factors is concerned (cf. Meisels & Shonkoff, 1990). Cross-culturally most notable are malnutrition and exposure to diseases. Malnutrition, both of the mother and the child, is not only a matter of the availability of nutritients, but also of sociocultural customs on how they are used. Harkness et al. (1988) quote research on the lack of success of an inoculation campaign among pregnant women against tetanus of their babies in Sri Lanka. Perceived harm to the fetus is one factor mentioned in explanation; another has to do with the fact that in the local language tetanus is grouped together with other diseases, leading to an observation of apparent ineffectiveness of the inoculations. Guthrie and his colleagues (Guthrie, Masangkay & Guthrie, 1976; Fernandez & Guthrie, 1984) have documented how the frequent use of sugar cane as a sweet leads to teeth decay with young children in the Philippines and how mothers may wean children at an early age in the case of intestinal disorders, because of local beliefs about 'thin milk' which would not be good for the baby. It is also recognized that deficiencies of minerals or vitamins can affect mental functioning of children when there are no overt physical symptoms, e.g. in case of iodine deficiency (Bleichrodt, 1986).

General effects on mental development most likely come about through what has been called 'functional isolation' (Levitsky & Strupp, 1984) when lack of physical energy leads to low activity level, poor attention and lack of motivation. Malnutrition, and associated conditions such as lack of hygiene contagious diseases and poverty, can be attributed to external factors of a political or macroeconomic nature which persist for a long time and affect daily life in many ways. However, in as much as they can be explained in terms of social customs the effects are incidental, rather than systematic, as shown by the examples mentioned. These customs have the character of conventions, and they are usually fairly readily changeable, provided the individual can perceive a scope for change and the need for change is recognized. A recent example that change on a major scale can be brought about is the dramatic decrease in smoking that can be observed in a number of Western countries, even despite the addictive properties of nicotine. A case can be made that this change is incidental; at the same time a number of the countries concerned show an increase in the consumption of alcohol and the incidence of drug addiction.

When critically analyzed also the evidence for broad effects of socialization practices on behavior beyond the sphere of physical health, such as cognitive and social development, is probably far less extensive than often thought. A consistent set of findings has been reported by Barry and his colleagues (Barry, Bacon & Child, 1957; Barry, Child & Bacon, 1959) on the basis of analyses of a large archive of coded ethnographical information, the Human Relations Area Files (HRAF). They identified a dimension of ranging from training for compliance to training for assertion, with universally girls being more trained for compliance (including responsibility and obedience) and boys more for assertion (including self-reliance and independence). Across societies they found a strong relationship between mode of economic subsistence and the way in which children are educated. In hunting-and-gathering societies, characterized according to Barry and his colleagues by low food accumulation, children were socialized more towards independence and learning to use opportunities as these arise. In pastoral and agricultural societies, with high food accumulation, there was much more training towards compliance. The daily care for the herd and the seasonal demands of agriculture require conscientiousness and leave little scope for adventure. However, field studies with systematic data collection through observation, such as the Six Culture Study, have suggested that within-culture variance on such variables as warmth of mother and responsibility training was generally larger than between-culture variance (Minturn & Lambert, 1964). The clarity of the patterns of findings in studies like that of Barry and colleagues may well have to do with the method of study (ethnographies tend to emphasize differences) and with the cultural level of analysis in which individual variations are not taken into account.

To be added to this is uncertainty about the long term consequences of early childhood patterns of caregiving that by Western standards point to severe stimulus deprivation. Kagan and Klein (1983) have reported about a village in Guatemala where during the first year of their life children are mainly left inside a small windowless hut. These children were very apathetic. Among the 11 to 13 years old children in the same village they could not observe any ill effects of this treatment. It may be noted in passing that an American psychologist, Rebelsky (1967), in the sixties criticized Dutch mothers for leaving their children alone for long hours, either inside the house in a crib, or outside the house in a pram or enclosure. Also in this case no ill effects have been traced and Rebelsky and Daniel (1976, p.292) later argued that the human organism "can undergo various kinds of deprivation without significant loss and with the possibility of 'catching up' later." Although this is difficult to document, one gains the impression that evidence favoring the continuity assumption tends to come from studies in which (a section of) the children in a population are exposed to a disadvantageous environment for most of their youth, and certainly not during the early years of life only. Apparently even then a fair proportion overcomes this handicap (Werner & Smith, 1992). As a rule, any society that functions normally provides sufficient emotional security and opportunity to enable its young members learn what is necessary for adequate functioning.

The picture that emerges from this extremely brief, and at points undoubtedly biased, review of the cross-cultural evidence can be summarized in three points:

- Relationships between culture and behavior usually can be described adequately in terms of external factors with effects at a low level of generalization. (Whether this is in the nature of culture, as suggested here, or a reflection of our ignorance of its intrinsic complexities is of secondary importance for current intervention programs.)
- Ongoing (but reversible) adaptation to continuing long-term aversive conditions is difficult to distinguish from (irreversible) cumulative deficits.
- Sociocultural conditions in early youth that clearly deviate from current western standards do not necessarily have long term negative effects on developmental outcomes.

The consequences are as follows. A 7 year old will have to learn the skills and conventions that allow participation in the hundreds of actitivities of a day. There will be constraining conditions in any sociocultural environment, and sometimes these can be so severe that they severely curtail the total range of activities. There will also be relationships between various elements of the behavior repertoire, but in the total organization of the repertoire, many of these links will be based in historical events that are incidental, or, if you like, culture-specific.

2 Implications for educational intervention programs

As mentioned, the point of view that one has on cross-cultural differences has far reaching implications for the use of intervention programs. Even the main goal of organizations like UNESCO, to achieve literacy for everyone independent of cultural background and expectations for future adult life, reflects an educational philosophy that is not of all times and societies. This is not the place to discuss the moral and social assumptions underlying contemporary intervention strategies. It will be taken for granted that cross-culturally common educational objectives are worthwhile, at least sometimes.

Most of the consequences that follow from the perspective outlined in the previous section can be clustered around the question to what extent transfer of intervention programs across cultural boundaries is meaningful, and to what extent each cultural population requires separate programs developed for its specific circumstances. Transfer is possible to the extent that there is cross-cultural invariance. In the literature on the transfer of psychometric tests various levels of invariance have been distinguished (Van de Vijver & Poortinga, 1982; Poortinga & Van der Flier, 1988) which, with some modification also apply to intervention.

The first level is invariance of psychological functions. If the cross-cultural identity of psychological functioning is in any doubt, there is no basis for any transfer. If in each cultural context performances, like reading and writing skills, are developed in a psychologically distinctive manner, the construction of intervention programs has to be culture-specific. The evidence reviewed in this chapter and presented in other chapters of this volume (e.g. Eldering & Vedder; Kağıtçıbaşı) is rather incompatible with an extreme relativistic viewpoint and further discussion about possible variation at this first level does not seem fruitful.

The second level of invariance is that of psychological constructs and theories. Are current Western theories and concepts universally valid, or are they culturally specific, like the parental ethnotheories that have emerged from descriptive studies in various non-Western societies? If we consider the brief history of intervention programs it is obvious that there have been major changes in the course of a few decades. For example, in the late sixties there were serious plans to introduce Western play materials on a large scale in African societies to stimulate creativity and the development of cognitive abilities. Today such an approach which did not at all consider the wider social and ecocultural environment is unlikely to be found (cf. Super & Harkness, 1986). Such major changes as well as continued scientific debate on virtual all major principles of development, imply that currently popular theoretical conceptions should be looked at critically before they are accepted as valid. From a position of cultural relativism it may be questioned whether it should even be attempted to seek universal psychological concepts. From the position of moderate universalism this is an objective that can be pursued meaningfully and one that seems to fit in well with the trend towards common educational goals, at least in literacy education. Of course, possibilities for transfer are limited to the extent that the initial position of children or the educational objectives in different societies is not the same, but these are extrinsic reasons that are easily recognized; they have nothing to do with cross-cultural differences in psychological functioning.

The third level of invariance has to do with administration procedures. Good intervention programs come with manuals in which these procedures are described in some detail. The question is to what extent these procedures have to be adopted to local educational styles and practices. Although it follows from earlier comments that there probably are universally more effective and less effective teaching styles, it also follows that in practice members of a group may be more familiar and at ease with a certain style. Therefore, adaptation of program procedures on the basis of information of local experts seems to be indicated.

The fourth and final level of invariance is that of program content. From extensive research on the cross-cultural transfer of psychometric tests it has been learned how easily items can undergo an unexpected change in meaning. More often than not these changes can only be explained post hoc when items are found to be more difficult or less difficult than expected. Even experts who are asked to judge the relative difficulty of items for different groups are not very successful in this task (Tittle, 1982). Again it appears that our insight in cultural processes is rather limited. It is at this level that an indigenous approach to intervention programs is not only possible or desirable, it appears to be absolutely necessary.

In summary, there are various considerations that plead for transfer, namely, invariance of educational objectives (e.g. reading and writing), invariance of cognitive and linguistic processes, and relevance of theoretical formulations in other cultural contexts than the one in which they were developed. Limitations to transfer are imposed by differences in socialization styles, differences in cultural conventions and practices, and differences in skills at the start of the intervention.

Some further implications relate to the poor theoretical basis of many intervention programs. Authors generally seem to accept that it is known what is good for children, but the psychological mechanisms through which programs, especially the broader ones, are operating on closer inspection remain fuzzy and unclear. The absence of the name of Piaget, still the main developmental theorist, from the name index of an important recent book by Myers (1992) is a telling illustration. The absence of explicitly formulated theory has at least two negative consequences for the implementation of intervention programs. In the first place, it is far more easy to evaluate the validity of a program if testable hypotheses can be derived form theoretical claims about effectiveness. Effect studies of intervention programs tend to depend heavily on variables that have been identified post hoc (cf. Eldering & Choenni-Gobardhan, 1990); the dangers of such validation are well-known (Slavenburg, this volume). Secondly, vague knowledge is not very helpful when reconstruction or adaptation of a program is needed for another society as for which it was developed originally.

However, it may be questionable whether program makers can do much better. If one looks at the historical development of intervention programs for children in disadvantageous conditions there has been a major shift from focussed short interventions, usually meant to improve performance on cognitive school tasks to broadly based programs that start much earlier in life and are meant to improve the environment in which the child grows up as well as various skills (e.g. Kağıtçıbaşı, 1992). it follows from the evidence presented in the first section that this is a worthwhile development. Programs focussed on specific skills, or some limited domain of behavior can be successful, also when started later in life. The plasticity of behavior guarantees success if there are no sociocultural constraints (e.g. negative attitudes) that are barriers to effectiveness. But if an intervention program is going to have a broader and more lasting impact, it will have to change a sufficient part of the behavior repertoire for a sufficient part of the developmental course. If so much of the behavior repertoire is dependent on incidental effects of the cultural environment (e.g. conventions) as suggested earlier on, then the best one can do is to represent as much of the desirable repertoire in the program. The more is covered, the greater will be the success. In as much as this perspective is correct, the precise contents of a program become less important. As long as all major areas of behavior are covered, one might as well follow within each area a sort of shotgun approach. This would mean that the differential validity of programs should mainly be a function of the time and energy invested in each child and that the adaptation of a program with culture appropriate procedures and contents should only lead to minor differences in effectiveness.

This section can be summarized in the following points:
- Principles of intervention which are effective in one society should be effective elsewhere, but administration procedures and program content will have to be adapted.
- Programs which address many facets of behavior and provide treatment over long periods are probably the most effective.
- In view of the fuzziness of culture-behavior relationships the precise set of tasks in a program may not be of great importance.

3 Conclusions

The main argument in the present chapter is that a moderate version of universalism provides a pragmatically sound basis for looking at intervention programs. For the purpose of educational interventions it can be safely assumed that learning principles are the same everywhere. Transfer of intervention principles which have proved to be effective in one cultural context to some other society is a meaningful enterprise. (Of course, this only holds if similar objectives and similar initial conditions exist elsewhere.) Similar psychological processes can lead to quite different manifestations of behavior. But broad cross-cultural differences in behavior repertoire can better be seen as a direct reaction to major differences in external circumstances than as a reflection of internalized dispositions acquired in the process of socialization. The many differences in culture-specific skills and conventions require adaptation of the procedures and contents of programs that are to be transferred.

A corollary of the present position on cross-cultural differences is that intervention programs with general objectives, such as success at school, can only be expected to have a lasting impact if they address a significant part of the many aspects that make up the total repertoire of relevant behaviors.

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INTERACTION BETWEEN DEVELOPMENT PROCESSES AND SOCIO-CULTURAL CONTEXT

LINKING FAMILY, SCHOOL AND LITERACY THROUGH PRESCHOOL INTERVENTION

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1 Introduction

Even though *Literacy for All by the Year 2000* remains a distant dream, the UN General Assembly's proclamation of 1990 as the International Literacy Year generated a great deal of interest and focused attention on alternative strategies for spreading literacy and education. The multi-pronged approaches to literacy acquisition and retention have encompassed adult literacy programs, functional literacy, propagation of indigenous literacy and use of mother tongue maintenance in minority education programs (see Sinha, 1990, and Freebody & Welch, 1993, for discussion of relevant issues).

During recent years, concerned by the increasing number of illiterates especially in the developing countries, scholars have raised questions regarding the assumptions that a) literacy is essential for realizing and maximizing human potential and b) literacy is associated with industrial development and improvement in socio-economic standards of the population (see Kumar, 1993, and LeVine & White, 1986, for extended discussions on these issues). Possibilities of exploring alternative or indigenous forms of literacy have also been considered. The point for debate, as well articulated by Kumar (1993), is not whether literacy is significant to the non-developed countries, whose educational systems are plagued by problems of poor enrollment, high drop out rates, poor classroom facilities, et cetera. The debate, in the twenty-first century, with the shrinking globe, knowledge explosion and demands on communication, centers more significantly around the questions a) how to make literacy acquisition and retention more meaningful to families and children of first generation learners? and b) how can one intervene to create a literacy environment such that home-school linkages are established and a common ground created to facilitate children's learning in mutually supporting, rather than conflicting, environments, right from the early preschool years?

The present chapter focuses on intervention during the preschool years to create a literacy environment through involvement of the family and community in the literacy experience. The interaction between the development of cognitive skills and the socio-cultural context in which learning is embedded is evident when viewed in the light of the research findings related to the cognitive consequences of literacy and schooling. The empirical findings indicate that acquisition of cognitive skills is facilitated by contextual similarity in the learning settings and more significantly, the acquired cognitive skills lend themselves to transfer when conditions and contexts for performance share similarities. During the preschool and primary school years particularly, the home and the school are the two major settings to which young children are exposed. Yet, even though several impact evaluation studies of preschool intervention programs in developing countries have indicated encouraging results (e.g. Halpern & Myers, 1985; Kağıtçıbaşı, 1992; Myers, 1989; Sharmia, 1992) reports on successful parent and community involvement have been rare (Kağıtçıbaşı, 1992). During the past decade, ethnographic studies have examined the interface of language experience in the home and school settings (e.g. Heath, 1983, 1986). Also innovative intervention projects to establish and strengthen home-school linkages have been carried out. These studies and projects offer keen insights for program planning and educational intervention during the early years. They provide guidelines for evolving a culturally sensitive and adaptive psychosocial context for literacy acquisition and retention. The present chapter is hence organized in two major sections: a) cross-cultural evidence regarding the cognitive consequences of schooling and literacy is reviewed in the first section; b) the second section presents brief summaries of selected ethnographic studies and intervention programs to highlight the significance of understanding and embedding the learning experience of children in their socio-cultural background. Implications are drawn from the above for early childhood education policy and program planning and implementation.

2 Schooling, literacy and the development of cognitive skills: cross-cultural evidence

Varied claims have been made by developmental psychologists during the past three decades regarding the specificity-generality dimensions of cognitive skills acquired through literacy and schooling. The early proposal that practice in using language 'out of context', as is the case of most school learning, makes mental manipulations and organization of concepts possible, thereby increasing the use of abstract thought (Greenfield & Bruner, 1969), postulates that the influence of schooling is overarching and general. On the other hand, the careful review of cross-cultural literature by Rogoff (1981) and the systematic attempts by Cole and his associates (Cole, 1990; Laboratory for Comparative Human Cognition, 1983; Scribner & Cole, 1978a,b, 1981) to unravel the contribution of both schooling and literacy to the development of cognitive skills, lead to more modest expectations, indicating context specificity in transfer and generalization.

Comparisons of schooled and unschooled children to establish the cognitive consequences of schooling are plagued by methodological problems such as: comparability of the two groups on key demographic variables; differential familiarity with test materials and procedure; difficulties in following testing instructions; and ease in responding to an unfamiliar tester. In this context, two research studies undertaken by Cole and his associates may be considered particularly significant in their attempt to unpackage the effect of literacy and schooling (Scribner & Cole, 1978a,b, 1981) and the confounding of age and other demographic influences with schooling effects (Sharp, Cole & Lave, 1979). The results of these two studies and Cole's subsequent interpretations of their work are summarized here.

Drawing from their observations of unschooled but literate adults among the Vai of Liberia, Scribner and Cole have questioned some of the generalizations made about the consequences of literacy. Their research among the Vai, a people who had invented a syllabic writing system to represent their own language, provides a unique opportunity to investigate the effects of becoming literate separately from the effects of attending school. The study was designed to disaggregate the influence of type of literacy (English school, Vai script, Quranic and Arabic language) on specific cognitive skills. Their findings indicate that Western type, formal English schooling contributes to performance on most tasks that were devised to model Vai script practices. "(...) But script literacy shows no such similar spread to the general ability tasks that historically have demonstrated the influence of schooling." (Scribner & Cole, 1981, p.253). Summing up the evidence with respect to the substitutability of indigenous literacy and schooling, the authors point out that "where tasks involve highly specialized skills involved in learning or using a particular script, school drops out as a determinant of performance (...) as tasks move away from specific script-related skills (...), schooling goes considerably farther in encompassing functional literacy related skills (...) than script knowledge does in capturing school related skills." (p. 254).

Another significant contribution made by Cole and his associates' study in Yucatan, Mexico (Sharp, Cole & Lave, 1979) relates to ruling out selection artifacts as sufficient explanation of the performance differences associated with schooled and unschooled subjects. Results of their experimental studies using categorization, memory, and problem solving tasks, with subjects ranging in age from approximately 10 to 56 years, indicated that age and educational experience contributed differentially to performance on different tasks. Influence of education was seen clearly in tasks involving economic classification, organizational strategies, syllogistic reasoning, and school related problem solving (such as arithmetic problems). Age related effects were more prominent in tasks that were well structured or where functional criteria and real-world knowledge could produce a correct response.

The succinct summary by Rogoff (1981) highlights some of the specific cognitive consequences of schooling. Schooling evidently promotes: a) use of graphic representation; b) competence in using strategies to connect and deliberately remember disconnected bits of information; and c) use of taxonomic classification as preferred to functional classification. On the other hand, "Schooling appears to have no effect on rule learning nor on logical thought as long as the subject has understood the problem in the way the experimenter intended." (p. 285).

The point of interest in these and other studies related to effects of schooling and literacy (see Rogoff, 1981, LCHC, 1983, for comprehensive reviews) centers around the specificity-generality dimensions of school acquired cognitive skills. Ideas generated in this regard have particular significance for policy decisions related to universal primary education and literacy campaigns of international organizations such as UNESCO and for national policies on education. The extent of generality of the acquired cognitive skills to non-school (or real life) contexts "(...) depend crucially upon the extent to which forms of cognition mastered (...) are relevant to other contexts; put differently, *transfer* of school-based knowledge should be sought in the environments as well as in the transformed capacities within children's heads." (Cole, 1990, p. 106). Cole (1990) identifies three possible sources that could facilitate the generality of cognitive competencies gained in school: a) writing that aids in performance in many real life settings; b) acquisition of curriculum content that can assist in real life problem solving (provided that at least some part of the school curriculum is connected with real life situations); c) the acquisition of language that enables access to meaning systems that carry with it 'the culture's theory about the nature of the world'.

The major ideas that can be gleaned from the review of available, cross-cultural literature on the cognitive consequences of schooling and literacy lead us to conclude that both literacy and schooling promote the acquisition of specific cognitive skills. Generalization and transfer of these skills are contingent upon the opportunities to use and rehearse the acquired skills in real life contexts. Literacy, schooling and cognitive development are embedded in the larger socio-cutural context. Hence the corollary that follows is that the learning experience of children, especially in the early years of school, needs to use to advantage the real life situations of their home backgrounds to facilitate contextual similarity and to give meaning to their new experiences in literacy acquisition. Further, the home-school linkages should be strengthened in order to use to advantage the potentials in homes for providing a literacy conducive environment by coopting the parents' collaboration with teachers in the child's literacy experience.

The central thesis of the present chapter is that acquired cognitive and literacy skills are context specific and that transfer of learning can be sustained and facilitated only when children have an opportunity to rehearse them in environments that provide contextual similarity. That translates to the need for creating literacy environments by: a) learning more about the culture and language of the homes, especially those from disadvantaged minority groups; b) establishing linkages between the learning that transpires in the home and school settings by creating zones of proximal development in the school settings; and c) strengthening the linkages of preparing the homes and the family for school learning by making them partners in the literacy enterprise. Selected ethnographic studies and preschool literacy intervention programs are described below as exemplars to illustrate the feasibility and efficacy of such home-school linkages.

3 Ethnographic Studies

A comparative case study of Roadville and Trackton

The powerful role that different types of institutional networks and varying perceptions of language play in the acquisition and retention of literacy has been demonstrated by Heath (1983, 1986), in her work with white and black working class communities in Roadville and Trackton, in the southern United States. Both are literate communities whose residents can read and write with comprehension and with competence required to transact business in their daily lives. What emerges from the detailed ethnographic account is the radically different perspectives held by Trackton and Roadville adults regarding children's learning of language and their implications for school literacy.

In Trackton, children *learn to talk* whereas in Roadville, adults *teach them how to talk*. In Roadville, reading is viewed as a good habit, but little actual reading was observed; there are few links between home reading materials and outside institutions. Church and television-reinforced sports events provide social and interactional links, and reading does not serve the purpose of introducing new information or information exchange. Writing followed a similar pattern as reading, i.e. primarily for individual purposes. Oral communication was preferred. In Trackton, reading was frequently a shared group experience, a "shared negotiation of the meaning of written materials" (Heath, 1986, p.224). Reading and writing were also closely integrated with church activities and followed a similar group pattern.

The observation of particular interest here is that neither the Roadville nor Trackton children fare well in formal schooling. Heath interprets the outcome as a consequence of the fact that each of the communities described shares only one of two critical features of literacy. In Roadville, children are preschooled into examining language as an artifact that can be taken apart and reassembled. However, there is little discussion regarding the written word beyond the family. Trackton children, on the other hand, are exposed to wider discourse in family and community contexts, but have little exposure to the presentational and decontextualized aspects of language.

The school setting and its literacy demands are conducive to the Roadville children at school entry since they are well versed "in the decontextualization of reading and in school-approved approaches to written texts and artifacts" (Heath, 1986, p. 226). However, when demands are made to interpret and generalize information and share meaning, the children start having trouble. As for the Trackton children, the school makes no effort to use their community ways of discourse to advantage learning to read and write alone. Heath's ethnographic account of Roadville and Trackton best illustrates the critical significance of language experience in the preschool years and their impact on school learning. Heath's work emphasizes the embeddedness of language learning in its socio-cultural context. Such an emphasis has evident implications for structuring learning in school settings. The language used as the medium for literacy must be both akin to and supportive of the language of the home, if the child is to make sense of his experiences. Once again the theme remains *ready the schools for children.*

The curriculum of tailor's apprenticeship: An ethnographic study of Vai and Gola tailors in Liberia

Lave's (1990) study of Liberian apprentice tailors is an example of another breakthrough in scholars' attempts to understand complex learning as embedded in the real life context. Lessons learnt from such an analysis can well provide important guidelines for making literacy acquisition more meaningful and for facilitating the transition from preschool through primary school years, in a graduated series of learning experiences related to numeracy and literacy.

In her ethnographic study of about 250 men, working as master tailors and apprentices, Lave presents a detailed description of the learning process involved in the young tailors acquiring a mastery over the craft. Highlighting how the production steps are reversed in the learning process, Lave draws attention to a significant feature of the practice of understanding as the apprentices begin by first learning the finishing stages of producing a garment, then go on to learn to sew it, and only later learn to cut and design garments. The reversal in the steps involved in production enables the apprentices to focus on the broad outlines of garment construction with each further step offering an opportunity to appreciate how the previous step in the garment's construction lead to the present one. Whole-activity practice is viewed as critical and chances of failure are minimized.

The theoretical framework within which Lave presents her arguments in favor of the *practice of understanding* can be summarized as follows: the basic assumption is that learning and understanding are socially and culturally constituted "(...) knowing, thinking and understanding are generated in practice, in situations whose specific characteristics are part of practice as it unfolds." (p.311). The following implications for making school learning more meaningful are derived from Lave's fine grained analysis of the steps involved in apprenticeship among Liberian tailors and other ethnographic studies related to use of math in everyday practice as well as in the US schools (Lave, 1988): a) lessons should be embedded in real life settings so as to facilitate transfer and application of the acquired knowledge and skills; b) lessons should be organized as specifications of proper practice, i.e. graduated through changing zones of proximal development; c) lessons should be structured such that the learners have a sense of *owning* the problem and feel propelled to develop the *practice* for resolving the same. Such an approach enhances a participatory approach to learning at all levels.

In the remainder of this chapter three exemplary experiments of home, school, and literacy experience linkages are provided. The first case study relates to an adult literacy project that resulted in creating a community literacy environment and subsequently intervened at the primary and preschool levels. Two of the case studies focus on interventions in preschool and early primary grades.

4 Literacy interventions: strengthening linkages between home, school, community and literacy

The Bay of Bengal Project

Funded by the Food and Agricultural Organization (FAO), the Bay of Bengal Project was conducted in three of the coastal states of India, namely Tamilnadu, Orissa and Andhra Pradesh (L.S. Saraswathi, 1986, personal communication). The experimental phase of the project was in operation during the late seventies and early eighties. The focus was initially on promoting adult literacy among the fisherfolks in the coastal villages of the three states but soon preschool education for young children became a focus also.

The sensitivity of the project organizers was evident from the very initial steps undertaken to introduce literacy among the fishing community, the majority of whom had no literacy skills and all of whom spoke a dialect distinctly different from that used in school text books. During the initial stages of the project, the organizers and team members lived in the villages for about three months, getting acquainted with the fisherfolks, and making detailed ethnographic records of their language use, major purposes for communication, and power relations in the community and the family. The second phase consisted of conscientization, i.e. developing an awareness among the members of the community regarding the significance of literacy in their lives through group meetings and focused group interviews. The entire exercise was participatory in nature, enabling the members of the community to identify specific life situations that were significant to them, e.g. they had a *fund of knowledge* related to weather prediction and the moods of the sea that was important for decisions related to fishing expeditions (cf. Moll & Greenberg, 1990).

The project team enabled the community members to relate specific experiences associated with the various daily life events and had those converted to lessons written using the vocabulary and dialect of the fishing community. *Animators* were chosen among the literate members of the community and they were trained to conduct classes in a participatory manner. The process and summative evaluations indicated several gains: enthusiastic participation in the literacy programs; surprisingly high enrollment of women and adolescent girls in adult literacy classes; interest in enrolling children in regular schools and willingness to enroll preschool children in the *anganwadis* (non-formal preschool program of the Integrated Child Development Services; see also Muralidharan & Kaul, in this volume). The Bengal Bay literacy project is a good example of literacy *for* the people, *of* the and *by* the people. The viability of the project was tested in terms of its large-scale application and rich collection of resource materials.

Learning to read and write in an inner-city setting

McNamee (1990) reports on her longitudinal research based on her long-term involvement with teachers, students, and parents of an inner-city preschool (in Chicago). Literacy development in this project was viewed as a socio-cultural construct and as highly related to people, their patterns of communication, and their use of written language to mediate activities in day to day life. Influenced by Vygotsky's writings on the role of play in development and in literacy learning, McNamee helped develop the preschool into a supportive social context for the sharing of ideas, story telling, and the reading of books. Her analysis captures the inter-relationship between the children's literacy development, the teacher's work, the researchers' contributions, and the parent's support and involvement. The development of this *community* of readers, writers, and language users was greatly facilitated by the exchange of written communications among the participants. For example, the teachers were given a small notebook for each child. Every week, the teacher wrote one or two sentences in the notebook for each child and sent it home with the child for the parents to read. Parents were requested to do the same and send the notebook back to school. For all concerned, literacy became the object of study and the medium through which to create conditions for literacy development.

The Haringey Project

The Haringey project (Tizard, Schofield & Hewison, 1982) provides an excellent example of the dramatic changes that can be brought about in primary school children's academic progress when teachers and parents work as partners. The project, established in the London Borough of Haringey, involved working with a multi-ethnic group of parents, many of whom were non-English speaking and some of whom were even illiterate. The experimental program involved three groups. Children who read aloud to their parents at home regularly were compared to another group which was given a school based language intervention program conducted by a qualified teacher and also a control group. The teachers were able to get the parents to cooperate, take an active interest in the children's reading, and even keep records of what was read. The researchers report that parental involvement had a pronounced effect on the student's success in school. Children who read to their parents made significantly greater progress in reading than those exposed to small group interaction in reading, given by a highly competent specialist. Both groups fared better than the control group. Furthermore, the parent involvement program was effective for children at all levels of performance and, according to the teachers, the children showed an increased interest in school learning in general. The concept can easily be applied to acquisition of pre-literacy skills during the preschool years.

5 Implications for educational policy and program planning

The relevance of the findings for educators and policy makers of ethnographic studies of language and learning environments of young children and of successful programs of home-school linkages in the pre- and primary school years, derives from their demonstration that educational programs can succeed in preventing the academic failure experienced by children from disadvantaged home settings. Implications for educational policy planning, teacher training, and curriculum development encompass the following. The strengths and learning potential of empowering parents as partners in children's literacy development and school learning should be appreciated. Teachers should be made sensitive to differences in the language environments of children, especially those from ethnic or language minority groups. Home-school linkages should be facilitated by adapting the language and the curriculum of the school to bridge the two main micro-systems in which children operate. Teachers in pre- and primary school settings should be encouraged and supported to create changing zones of proximal development to make literacy acquisition and retention more similar to real-life learning experiences. Finally, children should be empowered by recognizing and accepting their identity as members of different language, ethnic, and cultural identities, and using these differences as tools for learning.

Luke (1993) succinctly summarizes the educational philosophy implied in embedding education in the socio-cultural context in his commentary on Heath's work: "(...) Like language maintenance, the propagation of literacy in a given community is contingent on: first, enabling institutional supports, strategies and polices; and, second, the necessity for texts and textuality in daily economic and cultural practices." (ibid., p.3). The provision of institutional support is best exemplified in the preschool intervention casestudies of MacNamee's project and the Haringey Project where the school systems work actively to involve the parents as collaborators. The provision of texts and textuality in daily economic and cultural practices is illustrated in the Bay of Bengal Project where the entire approach to literacy is built around the life experiences of the community.

A similar rationale is presented by Moll and Greenberg (1990) in their thesis on creating zones of possibilities for learning by combining social contexts for instruction. They focus attention on the funds of knowledge available in all households, regardless of the families' years of formal schooling or significance assigned to literacy: "Funds of knowledge entail a broad set of activities which require specific knowledge of strategic importance to households" (p.323). Families, the world over, have knowledge related to child care, causes and cures for illness, animal care, farming, carpentry, folk arts and so on, and the associated skills for survival and living. In short, households' funds of knowledge are wide-ranging and abundant. It is a matter of great concern that such existing funds of knowledge and the way in which they are transmitted, "(...) rarely make their way into classrooms in any substantive way (...) funds of knowledge represent a major, untapped resource for academic instruction" (p. 323).

Advocacy for creating a literacy environment through preschool intervention and home-school linkages, pertinent though it is by itself, must necessarily be viewed in a broader socio-cultural context. Literacy acquisition and retention is feasible only when the process initiated during the preschool years and is consolidated during the primary school years and sustained in later real life settings. Educational policy and program planning need to take these into account. As stated succinctly by LeVine and White (1986) in their comparative analysis of educational development: "In the context of the contemporary nation-state, neither official policy nor grassroots volunteerism alone can be relied upon to realize desired potentials; they must work together, convergently and synergistically." (p. 217).

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Reference Note

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MODIFICATION OF COGNITIVE COMPONENTS: CONSEQUENCES FOR EARLY INTERVENTION

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1 Intelligence and intervention studies

Debates on the success of cognitive enrichment programs have a long history (for a recent update see Locurto, 1991). The leading question of these debates was simple: Can interventions lead to lasting changes in intelligence? The answer has proved to be anything but straightforward.

It is argued here that the debate has been hampered by conceptualizing intelligence as a general intellectual ability. Instead of relying on a conceptualization of intelligence as a general intellectual ability that is measured by omnibus tests and expressed in IQ, intervention studies benefit more from a componential view of intelligence (e.g., Sternberg, 1977, 1985) that leaves scope for precisely locating areas of change in the cognitive system. In this chapter I will discuss various issues related to the modifiability of the cognitive system of the child from a componential perspective.

In the next part a componential model of intelligence will be presented. The third part will discuss the modifiability of each component. Implications for intervention studies will be discussed in the final part.

2 A componential view of intelligence

The nature of intelligence has been discussed at length in the literature. Basically, two camps can be discerned, namely 'lumpers' and 'splitters' (Mayr, 1982; Weinberg, 1989). 'Lumpers' such as Spearman (1923) consider intelligence "as a general, unified capacity for acquiring knowledge, reasoning and solving problems that is demonstrated in different ways (navigating a course without a compass, memorizing the Koran, or programming a computer)" (Weinberg, 1989, p. 98); splitters such as Thurstone "hold that intelligence is composed of many separate mental abilities that operate more or less independently" (Weinberg, 1989, p. 99).

Despite the vast amount of effort and publications devoted to the debate, there is no real winner. It is increasingly appreciated that factors often assumed to be irrelevant for the results of a study (such as the heterogeneity of cognitive tasks and/or the intellectual heterogeneity of the sample studied: e.g., a random sample of the population or an intellectually narrower sample of university students), play an important role in the evaluation of the validity of lumper and splitter models. No model of intelligence can claim a universal validity, but various models will have their own domain of applicability. For example, lumper models are more likely to hold in an intellectually broad sample while splitter models are more likely in homogenous samples even if the same set of tasks would be used in both samples.

The lumper perspective was fruitful for the study of intelligence; Spearman's g (or general intelligence) gave rise to various new theories, instruments, and even to new statistical methods (rotation methods and new models in factor analysis) (cf. Van de Vijver, in press). However, the concept of general intelligence is counterproductive for intervention studies. Firstly, because of the high aggregation level of the concept it is difficult to pinpoint loci of changes after intervention. What does it mean that a child shows an IQ gain of 10 points after training? Does the gain refer to an increased reasoning capacity or to a training induced increment of knowledge in areas tapped by the test? Lumper models do not provide us with hints as to how to enhance the development of reasoning by training. Secondly, the concept of general intelligence is unlikely to generate accurate insight in transfer, a vital issue in enrichment programs.

Below, I shall propose a model of intellectual functioning that was first described as a model of abstract thinking (Van de Vijver, 1991; Van de Vijver & Willemsen, in press) but that can easily be extended to preschool intellectual functioning. The model has four components: pragmatic knowledge, reasoning schemes, metacognitive knowledge, and execution. These elements are discussed in the following subsections.

Pragmatic knowledge

People acquire a massive amount of factual information about themselves and their environment during their lives. Some of the knowledge may be derived from formal scientific theories but most of it is based on daily experiences. Examples are the knowledge that a ball rolls, that the sun generates heat, that there is a drink in the refrigerator, that 1000 x 1000 is called a million, etc. Some of the knowledge can be made explicit (e.g., Homer was a Greek poet), but some knowledge is based on often implicit inferences (e.g., children may be able to tell relatives from non-relatives long before they can adequately describe the concept of 'relatives'). Pragmatic knowledge is a summary label for all these facts and theories.

It should be acknowledged that terms such as facts and theories could easily convey the incorrect impression that this knowledge is invariably accurate; pragmatic knowledge can be accurate, incomplete or even incorrect. Its role in intelligence is vital; it is involved in all intellectual abilities. Pragmatic knowledge is the content to which the reasoning is applied.

Reasoning schemes

Problem solving starts from pragmatic knowledge, but having this knowledge available is usually not enough to be able to solve a problem. Problem solving involves stimulus transformations based on pragmatic knowledge. For example, when a child learns to speak, subtle generalizations and discriminations have to be mastered, such as in learning the difference between the concepts of 'mother' and 'woman'. The pragmatic knowledge of the words has to be refined by stimulus transformations (generalization and discrimination). Reasoning schemes, the second aspect of intellectual reasoning, refer to these stimulus transformation rules. They are comparable to Piaget's *schemas*, which are defined as a cognitive structure "that is a more or less fluid form or plastic organization to which actions and objects are assimilated during cognitive functioning" (Flavell, 1963, p. 55).

Theories of intellectual functioning tend to emphasize the role of stimulus transformation rules; reasoning schemes are often considered the core of intelligence. Spearman's (1923) theory of the psychological meaning of 'g' focuses on stimulus transformation rules such as the recognition of a relation between stimulus elements that are presented together (e.g., recognizing the opposition in the stimulus pair 'father-mother'). Piaget's theory of cognitive development provides a second example; the theory essentially amounts to a hierarchy of reasoning schemes successively mastered by the developing child. I believe the role of reasoning schemes in intelligence should not be overestimated. Stimulus transformations play an important role in the daily functioning of both children and adults, but they form merely one aspect of intellectual functioning. A child might have mastered the scheme required for conservation, but it should know some elementary concepts of physics such as volume of weight before the scheme can be applied. Failure to show conservation behavior in a testing situation does not preclude a successful mastery of conservation in stimulus domains more familiar to the child.

The separation of pragmatic knowledge and reasoning schemes can be superficial when it is applied to the behavior of young children; knowledge and transformation rules need temporally separable processes or entities but will usualy not refer to them. This is best illustrated in the behavior of young children. It is not uncommon to observe a close link between behavior and domain of application in young children. Small changes of the initial problem (e.,g., a slight rephrasing) may lead to substantial changes in the speed or even the accuracy of the solution obtained. Reasoning schemes are intrinsically linked to the problem-solving behavior in which they are applied.

Metacognitive knowledge

The third component of intelligence refers to the establishment of the link between pragmatic knowledge and a reasoning scheme. The child should realize that the solution of a problem requires a particular cognitive transformation. In order to find an adequate way to solve the problem, the child should be able to successfully connect pragmatic knowledge and reasoning schemes. Metacognition involves the control processes to monitor the solution (Sternberg, 1985). Examples of metacognitive components are the recognition and the choice of the relevant pragmatic knowledge, the choice of solution strategy, the monitoring of the solution process, and the change of solution strategy if the solution process does not lead to an outcome envisaged.

Metacognitive knowledge is closely related to transfer and generalization. Transfer training usually amounts to learning to apply previously acquired schemes to new instances. Work on the horizontal and vertical *decalage* in the Piagetian tradition shows the inadequacy of the assumption of intertask stability of reasoning schemes. Therefore, training programs schould aim at changing metacognitive knowledge.

Execution

The execution of the process refers to the final element of intellectual functioning. It involves the combination of the previous three elements in practical action. What the current model of intellectual functioning amounts to in practice can be illustrated by an admittedly not very original, though probably lucid thought experiment, in which an illiterate child from a non-Western culture is exposed to a Piagetian conservation task. The child is shown three transparent beakers, two of which are the same, tall and thin, while the third is short and broad. The two tall beakers contain the same quantity of colored liquid. One of the tall beakers is poured into the short beaker. The child is then asked to compare the amounts of liquid in the two beakers. This kind of problem presupposes a degree of pragmatic knowledge, varying from the physical concept of quantity to more mundane concepts such as fluid, transparency and beakers. The reasoning scheme, the conservation of liquid quantity, is the actual target of study. Metacognitive knowledge requires the recognition that the physical concepts mentioned are required, and the ability to verbally express the ideas. Moreover, the experimental situation presupposes knowledge about the kind of behavior to expect in question-answer games such as a testing situation.

The actual behavior (the execution component) is the outcome of this complex combination of pragmatic knowledge, reasoning scheme, and metacognitive knowledge. All these aspects are inextricably linked and can only be distinguished at theoretical level. Actual behavior is the outcome of the four elements, each of which will influence the final product. Suppose that the child fails to give an answer that points to conservation of the quantity of liquid. This raises the question of how this failure should be explained. Perhaps, as the failure may seem to suggest, the child has not mastered the reasoning scheme. The other cognitive components could also give rise to the answer that one beaker contains more liquid than the other. The child may be unable to give an adequate verbal account of his or her ideas (but may still accurately predict the level of liquid which will be attained by the water in a beaker of a model not yet used!). Also, the child may not be accustomed to working with transparent beakers. If the stimulus material is foreign to the child, there is an increased likelihood that the child will be unable to link his or her knowledge to a relevant problem solution. In summary, an adequate final product is conditional on the availability (or successful application) of each of the four elements.

3 Modifiability of the components

Enrichment programs often involve massive investments of human effort and money. In order to avoid wasting energy and money on interventions with a low *a priori* probability of success, the modifiability of each component must be accurately assessed. In particular, the debate on the modifiability of intelligence points to the need of such an analysis; in Weinberg's (1989) words: "The accumulating evidence suggests that the substandard intellectual skills and "thinking" capacities of mildly mentally retarded populations, most of whom manifest no particular organic or central nervous system pathology (cultural-familial retardation), cannot be substantially or permanently raised by special training (...). But there is good reason to believe that interventions can enhance the functional abilities, learning strategies, adaptive skills, and social competencies of children whose measured IQ is low" (p. 103).

In my view, all four components are modifiable through intervention, but the components strongly differ in the energy required to engender substantial changes through training. Designers of intervention programs should take this differential modifiability into account.

Modifiability of pragmatic knowledge

Pragmatic knowledge is easily modifiable. Scholastic information is a good example of a pragmatic knowledge base that is expanded over a long period. The training tasks of preschool programs will often contain pragmatic knowledge aimed at preparing the child for formal education, such as the teaching of letters and digits. Pragmatic knowledge should be included in enrichment programs, for at least two reasons. Firstly, the child will master knowledge that can be used directly in the regular curriculum (e.g., the recognition of letters and digits in the previous example). Secondly, much scholastic knowledge is cumulative; one concept is presupposed in the understanding of another. Hence, having mastered one concept it will be easier to comprehend another. For example, the child will have to have know what a letter is before it can understand the concept of a syllable.

There is no critical period in life after which individuals without organic damage cannot acquire new pragmatic knowledge. There is abundant evidence for the modifiability of pragmatic knowledge (some even claim for the modifiability of intelligence) in old age (e.g., Baltes & Schaie, 1976).

Modifiability of reasoning schemes

Cross-cultural research is an interesting domain in which to study the modifiability of reasoning schemes. Broadly speaking, two views on the modifiability can be found in the cross-cultural literature. The first one holds that formal education (or enrichment programs for that matter) can have a formative influence on reasoning schemes. This view is most clearly represented in the work of Vygotsky (1978) and, more recently, Tulviste (1991). Although these authors were primarily interested in the psychological consequences of schooling and literacy programs among adults, their argument can be readily generalized to preschoolers. In this view, training could lead to substantial cognitive changes. Vygotsky's theory has given rise to interesting empirical studies of "unschooled literacy" (i.e., literacy that is not taught in a formal school setting). Thus, Berry and Bennett (1991) found that, in contrast to what could be expected from a Vygotskian perspective, unschooled literates and unschooled illiterates showed similar performances on cognitive tasks. A lack of empirical corroboration has also been reported elsewhere. So, the view that training will have a formative influence on reasoning schemes is seriously challenged by empirical findings.

The second view is more in line with Berry and Bennett's findings. It holds that reasoning schemes are not well trainable. The view is expressed by Cole (1990) with regard to concrete operational thinking: "Although there is room for disagreement, I believe that it is sensible to conclude that concrete operational thinking is not influenced by schooling; what is influenced is subjects' ability to understand the language of testing and the presuppositions of the testing situation itself" (p. 99). I concur with this view. It is unlikely that children will acquire reasoning schemes through training; more likely, training will broaden the domain of application of reasoning schemes and hence, promote other aspects of intellectual functioning such as metacognitive skills.

In general, there will be no need to teach reasoning skills, because the children will have already mastered the schemes; what is lacking is the ability to use the schemes in testing situations, most likely because of a lack of pragmatic or metacognitive knowledge. This view is in line with Case (1992), according to whom the cognitive system is characterized by "conceptual structures" (comparable to our reasoning schemes) which are not applicable to the entire range of the children's experience, merely to experience within some particular domain (p. 62). Goossens (1992) even refers to "local structures" to emphasize the domain specificity of newly mastered cognitive skills.

Modifiability of metacognitive knowledge

Metacognitive knowledge is an underrated aspect of intervention studies. Intervention could lead to both narrow and broad effects on metacognition. The first kind will refer to test-wiseness, i.e., specific skills which, when applied to tests or assessments, lead to higher scores. Test-wiseness can create a threat to the assessment of preschool training by inflating true intervention effects. Moreover, it is questionable whether test-wiseness can be circumvented: "It is just about impossible for intervention programs not to 'teach the test' or to the experimental learning and performance tasks, because there are limited kinds of materials and mental and physical challenges that are testable at early ages" (Spitz, 1991, p. 332).

The second kind of effect is much broader and involves metacognitive knowledge that is not restricted to the training or assessment but refers to the establishment and successful application of a cognitive plan of action to solve a problem. Training can have a pervasive effect on various aspects of metacognitive knowledge, such as the selection of stimuli to be acted upon, the activation of retrieval systems and the monitoring of the solution (Rand & Kaniel, 1987).

The need to deal with transfer is illustrated in the literature on problem isomorphs (i.e., structurally similar problems dealing with different stimulus contents. An example of two problem isomorphs would be "How much is 2+2?" and "The family Johnson has two sons and two daughters. How many children does the family Johnson have?") (cf. Van de Vijver, 1991). Young children often experience difficulty in recognizing the structural similarity of problems, and hence, the applicability of mastered solution strategies. Training should be geared to expanding the application domain of a skill. Children should be taught how previously mastered solution strategies can be applied, probably slightly adapted, to new problem situations.

Transfer training is a powerful means to prepare young children for the cognitive demands that will be imposed on them in school. It has been repeatedly pointed out that transfer of knowledge and strategies is an important aspect of schooling; the use of generalized solution strategies has indeed been put forward as a distinctive feature of schooled subjects as compared to unschooled subjects (cf. Rogoff, 1981). Spontaneous use of strategies such as clustered recall in memory tasks can be assumed to be strongly influenced by schooling (cf. Wagner, 1981). The recognition of the relevance of strategies and the ability to use these in problem solving is probably one of the most characteristic aspects of what has been referred to as the "hidden curriculum" of formal education (i.e., the curriculum that is transmitted informally rather than formally).

Various procedures have been proposed in educational psychology to foster transfer. These could be implemented in intervention studies. Examples of relevant aspects that could be addressed in a metacognitive training are the recognition of problem similarity and isomorphism (Does the problem look like a problem that I have solved in the past?), and the adoption of general solution strategies (Can I split the problem in smaller parts that are easier to solve?). See Sternberg (1987) for an application of these principles to a thinking training program for secondary- and college-level students, and Feuerstein (1980) for an application to mental retardates.

It should be an important aim of intervention studies to reduce the disparities in cognitive functioning of the child across various domains. This aim is not accomplished by teaching reasoning schemes but by broadening the domain of application of mastered reasoning schemes; in other words, training children in metacognitive skills will usually be more efficient than training them in reasoning schemes.

The design of training programs would be considerably enhanced by a good understanding of the cognitive demands that are imposed upon children in school and in daily life. Such an analysis will probably show that the cognitive transformations used at home and in school do not differ appreciably but that the domain of application of the stimulus transformations is vastly different. A central aim of intervention studies should be to establish a better link between school and home in terms of the cognitive demands. Closing the gap between school and home could start by asking what kind of stimulus transformations are required, e.g., in reading, and which daily activities require the similar transformations. Unfortunately, the design of preschool programs is thwarted by a lack of such knowledge. I agree with Case (1992), who has pointed out that school curricula have hardly been analyzed from the viewpoint of their central conceptual structure; we do not know very much about the reasoning schemes required in formal education. Case's view also holds for the daily activities of children. As a consequence, it is easier to devise an intervention program in which scholastic or related knowledge is transmitted (cf. Slavin & Madden, this volume), than to devise a program that attempts to modify the cognitive transformations required in school.

Modifiability of execution

In problem-solving the three previous components are combined in a single action. The whole set can be considered as a skill (Fischer, 1980). Skills have to be trained, but the execution of skills will not vastly change after the training program. Increased efficiency after repeated exposure to a task is unlikely to be induced by mere execution. Rather, the improved performance is more likely to affect metacognitive knowledge. Repeated exposure will often lead to an increased efficiency of metacognitive knowledge, e.g., an increased ability to eliminate irrelevant task features, and a reduced need to ponder about the course of action to be taken.

4 Implications for intervention studies

The psychological domain aimed at in the intervention can be either narrow (e.g., reading, arithmetic) or broad (e.g., reasoning). It is more straightforward to design programs with a target that is narrowly defined from a cognitive point of view than to design a program that attempts to enhance broad parts of cognition such as reasoning. A componential view of intelligence is particularly effective in the latter case, as it will enhance the composition of a targeted and efficient intervention program. The modifiability of the various components and the need or desirability to change these should be taken into account in the design of an intervention program. The change of metacognitive knowledge is usually needed, whereas there is usually no reason to assume the absence of reasoning schemes. In intervention programs, the importance of generalization from the domain of application of previously mastered skills to new areas can hardly be overestimated. Transfer and generalization should be essential concepts in the design, implementation, and evaluation of training programs.

The magnitude of the effects that can be expected after training will depend on the cognitive components involved. Training in pragmatic knowledge (such as letter recognition) will often yield a steep, peaked generalization curve, i.e. the training will give rise a considerable change in scores at tasks similar to the tasks trained, but the transfer to untrained tasks will be limited. Metacognitive training, on the other hand, often geared to the domain broadening of a previously mastered skill, can be expected to lead to a flatter generalization curve, i.e. less dramatic score increments that, however, extend over a larger domain of tasks.

There is a massive literature on the teaching of thinking skills (e.g. Baron & Sternberg, 1987), but the training programs typically involve children above the age of four (e.g. Feuerstein, 1980; Sternberg, 1987). Designers of cognitive enrichment programs for preschoolers have to face a complicating factor that is not present in older age groups: it has been repeatedly demonstrated that the relationship between preschool and adult IQs is moderate at best; the correlations with adult IQ increase with age, but before the age of five or six the correlations are often low or even zero. In sum, we do not have a good measure of intellectual functioning at very young ages; in a similar vein, it could be argued that it is difficult to delineate intervention procedures for very young children aimed at a broad stimulation of cognitive growth.

The low correlations could be engendered by the lack of overlap in item content of developmental and intelligence scales. Developmental scales are taken to be 'insufficiently cognitive' to produce high correlations. In the last decade an interesting trend emerged which could help to reduce the problem of low correlations; there is a growing interest in the measurement of basic processes, frequently involving the assessment of basic cognitive and psychophysiological reactions to novel tasks (e.g., Lécuyer, 1989). In a review of empirical findings, Bornstein and Sigman (1986) reported significant correlations between habituation (a physiological reaction to novelty) and later IQ. Similarly, Farran and Harber (1989) found that "tasks measured in infancy and involving information processing in a novel learning situation are strongly related to performance on standardised tests during the preschool period if the children are developing in less than optimal environments." (p. 111).

It is debatable whether the approach to measure responses to novelty could live up to the high expectations some authors seem to have. The doubt is inspired by studies of the relations between IQ and simple cognitive measures such as choice-reaction time. The measures, known as 'elementary cognitive tasks', are found to show significant correlations with IQ, but the their magnitude almost never exceeds 0.30 (Hunt, 1987). A similar upper-bound of 0.30 could be assumed to hold for the correlations of simple tasks in infant research. In our research, which involved children of the highest grades of primary school, correlations between simple tasks such as choice reaction time tasks and IQ tests were not larger than 0.30, but substantially higher values were obtained for cognitively more complex tasks in which the solutions may have a latency of several seconds (Van de Vijver, 1993). As an example of a more complex task, children had to determine as quickly as possible the odd one out in a series of seven figures, six of which were identical. Again, it could be conjectured that the same pattern of findings will hold true in infant research, implying that the strength of relationship is primarily determined by task complexity. Tests of simple cognitive functioning, such as habituation to task novelty, are useful, but their power to predict IQ at later ages may be limited by the lack of cognitive complexity - the same factor that impedes the predictive power of developmental scales such as the Gesell Development Test or the Bayley Scales. Still, the previous studies point to the importance of task novelty and complexity at very young ages. The generalization of these findings to intervention programs is probably not far-fetched. These findings point to the need to include novel and complex tasks in training programs.

By focusing on cognitive components and their modifiability, important features of intervention have been neglected: the role of noncognitive factors and of the environment, especially the caregivers of the child. There are strong indications that non-cognitive factors are also involved, particularly in effective programs with long-lasting effects such as described by Kağıtçıbaşı (1992, this volume). These factors, which include mothers' enthusiasm and attitudes, result in more attention being given to the formal and informal learning of the child. Such an intervention program will have initiated a chain of lasting effects in mother and child.

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PART TWO

DEVELOPMENT AND LITERACY IN CULTURAL CONTEXT

MANY KINDS OF DEPRIVATION
YOUNG CHILDREN AND THEIR FAMILIES IN SOUTH AFRICA

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1 Introduction

Countless people in developing countries are desperately poor. This means they have little or no access to materials, facilities and services that they can use to safeguard their social and economic resources, improve their circumstances or bootstrap their children's chances for a better life. Nonetheless, many people, at least in South Africa, do improve their lives and those of their children. And they did, even during the most stifling years of Grand Apartheid; this is clear from the descriptions given by people like Sindiwe Magona (1990) of the way families, and particularly women, persevere in their efforts to educate and advance themselves and their children. This fact is testimony to the 'hidden potential' of knowledge, skills and resources in people, families and communities.

In South Africa this potential has been obscured from us by a number of things. Firstly, we have tended to maintain a conscious blindness to individual differences in people's adaptation to poverty and hardship, for fear that recognition and discussion of them might support the tendency of government to 'individualize' social problems and blame those who suffer most for their own situation. Second, both colonialism and apartheid have fostered an unconscious blindness to the psychological substance of poor (and especially, in South Africa, black) people. Instead, we have tended to see people in terms which parody Abraham Maslow's (1970) need hierarchy theory.

We have been inclined to view economically deprived people as entities who operate from a predetermined hierarchy of needs, the activation of each higher level being dependent on the fulfillment of lower level needs. We have tended to presume that belongingness, self-esteem and hope come into play only when hunger, thirst, physical safety and shelter are assured. By this reasoning we are led to presume that poor people have a greater need for food, clean water and shelter, than a need to feel loved by others and respect for themselves. By extension, we also seem to operate on the assumption that there is a hierarchy of psychological functions; that one cannot feel shy, hopeful or humiliated when one is hungry, thirsty or cold. An extreme illustration of this point is the long time it has taken for depressive illnesses to be recognized in Africa. In truth, all these needs operate simultaneously in human beings, and life is lived by people who synchronously exercise their psychological, social and physical capacities. It is our blindness which prevents us from recognizing the psychological life of economically deprived people and, by implication, their psychological resources. However, perhaps it is also more comfortable for us that way. It is less complicated to provide a tap, a meal or a book than to meet head-on the shame, distress and helplessness experienced by many poor people.

Another reason why we have tended to overlook the social and psychological essence of poor and oppressed people is because we have subscribed to a kind of cultural anthropology and cross-cultural psychology which amplifies cultural differences and frequently bypasses psychological depth in family relationships and parent-child interaction in non-Western cultures (for example, LeVine, 1990). Socialization, a process credited with great complexity in our own society, is often taken to be understandable according to but a few principles in other cultures - for example, that African childrearing can be characterized by the importance of compliance which is enforced through corporal punishment. In contrast to this view, Welch (1978), for example, has asserted that there is less divergence between the socialization practices of African and non-African societies than is generally believed.

In this chapter I would like to play down the influence of specific cultural influences and, instead, point out that, firstly, in South Africa there is a great deal of individual variation in coping with economic hardship, particularly with regard to the provision of nurturing and instructive experiences for young children, and that these differences are attributable to individual and social factors; secondly, that women, who are responsible for the care and guidance of young children, are increasingly burdened also with sole financial responsibility for children; thirdly, that some women, without sufficient material and social resources are psychologically overcome by adversity and their demoralization reduces their effectiveness as caregivers; fourthly, caregiving dysfunctions place at risk the social and psychological capacities of young children necessary for optimal participation and learning when given educational opportunities; and, lastly, apart from providing preschool and educational facilities and compensating for past inequalities, interventions need to be directed at caregivers by strengthening family ties, promoting paternal commitment to children, assisting vulnerable women in ways which increase their confidence and emotional engagement with their children, and increasing women's education and income-earning capacities.

2 Home environments of young children in South Africa

There have been very few studies of the home environments of young children in South Africa. Nonetheless anyone familiar with townships, squatter settlements and subsistence plots knows that side-by-side one may find stands, houses and people very different from one another. One dwelling may rest on a barren, dusty stand, its interior dirty and dismal, and its occupants inert and demoralized; next door may be a cultivated square on which stands a cardboard and corrugated iron house, its interior clean and cared for, inhabited by poor but spirited people (du Toit, 1993).

Psychologists, however, have been slow to respond to these differences. For example, on the basis of not finding any significant relationships between infant competence and socioeconomic factors in a group of Soweto children, Miller (1976) concluded that poverty precludes variations in life-style of much consequence for child development. In contrast, our own study of young children living in black townships indicate substantial effects of home environments on children's developmental levels, which are independent of measures of socioeconomic status.

In a study which examined the interrelationships between parental socioeconomic status, home environment, infant mental and psychomotor development and growth, 305 African infants aged 2 to 30 months were tested on the Bayley Scales of Infant Development and their mothers interviewed regarding family and home background. Home environment was assessed using the Home Screening Questionnaire (Coons, Frankenburg, Gay, Fandal, Lefly & Ker, 1982). The sample was drawn from well-baby clinics in the urban black townships surrounding the core industrialization sites in South Africa, including Johannesburg, Pretoria and Durban-

Pietermaritzburg. The Home Screening Questionnaire (HSQ, a proxy measure for Betty Caldwell's HOME Inventory) was translated into Sizulu and Setswana, the major languages used in the areas surveyed, and back-translated for checking.
In summary, the analyses of this study (Grieve & Richter, 1990; Richter & Grieve, 1991) suggested three major conclusions. Firstly, the HSQ appears to reflect the same major factors in black South African communities as identified in the United States. The primary factor evident in home environment scores in South Africa was labelled Opportunities for Stimulation and included items that tap caregivers' ability to structure the environment for learning and promote development by becoming involved in children's activities.

Secondly, there are wide variations in home environments and parental behaviors, both between and within different socioeconomic groups of people living in black township areas. Items tapping, for example, the kinds of playthings provided for a child, frequency of adult play with a child, and the extent of father (or other male) involvement in caregiving, were not found to be related to socioeconomic status.

Finally, none of the home environments examined in black townships provided what, by Western middle-class standards, would be called enriched environments. Nonetheless, the differences in home environments and day-to-day experiences of children which were found, were shown to be important correlates of children's developmental status. Bayley Scale indices showed significant positive correlations with home environment scores in the first two to three years of life, but were not significantly associated with parental measures of socioeconomic status (occupation, income and education). These results were taken to support the conclusion drawn by Bradley, Caldwell, Rock et al. (1989, p. 232) that "within a very broad range of environments, differences in the home environment are associated with differences in cognitive development irrespective of average level of environmental quality that is observed in a particular subgroup."

In a separate study of the home environments of malnourished children (Richter, 1992a), the HSQ, together with several other measures, was administered to 135 mothers of infants between 3 and 18 months of age who had been admitted to a short-stay hospital ward with a primary diagnosis of protein-energy malnutrition (PEM). A comparison group of infants resident in the same community outside Pretoria, with no history of hospitalization or PEM, was selected from the sample described above. The home environments of malnourished children were able to be distinguished, at a high level of accuracy, from the home environments of matched children with normal growth living in the same community, particularly on the primary factor of the HSQ called Opportunities for Stimulation. A model using items comprising this factor provided a significant separation of the malnourished and comparison groups, with an 85% level of specificity and sensitivity. That is, although no causal relationship is implied by the findings, features of the home environment of small children were found to be associated with health and development risks for young children, at least as expressed in protein-energy malnutrition.

It is clear that "different levels of socioeconomic status offer children experiences which are both different and unequal with respect to the resources and rewards of the society" (Hess, 1970, p. 457). However, without wishing to minimize the influence of harsh physical environments on the psyches of the small children who have to endure them, it is also necessary to assert, as Uri Bronfenbrenner puts it, " ... the primacy of the phenomenological over the real environment in steering behavior ..." (1979, p. 24). For young children, the experienced environment is one that is basically socially constituted. It is constructed from the interactions that children have with other people around them; for very young children, it is largely created by the involvement and responsiveness of their mothers and other primary caregivers. What the findings discussed above show is that, despite material poverty and low levels of education, some South African mothers are highly responsive to the social and cognitive needs of their young children, and provide day-to-day experiences for their children which are known to support and stimulate intellectual development. What is not entirely clear is which social and psychological factors are associated with caregiver differences in sensitivity and responsiveness to the needs of infants and young children.

3 Women - mothers and workers

The position of women and children in South Africa is made especially vulnerable by the prevailing nature and structure of the black family (Howell, 1992). Only about 58% of black women over the age of 18 years have ever been married (Central Statistical Services, 1993) and, depending on the area, between 20% and 60% of black households are single-parent female-headed (Simkins, 1986). Even when men and women are married, housing shortages and migrant labor prevent about a third of them from living together (Simkins, 1986). As a corollary, men and women sometimes live together for varying lengths of time, perhaps having one or more children together, without ever getting married. Whether men and women live together or not, it is not always possible for them to have their children with them, mainly for reasons of lack of accommodation and child care. For example, it was estimated in 1980 that nearly 20% of children under the age of 15 years lived apart from their parents (Simkins, 1986).

While there are social, economic and historical factors why some black people in South Africa have insecure partnerships, the instability of family life frequently forces women to assume sole responsibility for supporting their children economically. Most black women are restricted in their occupational choices, however, by their low levels of education and because there are not adequate child care provisions for working women. For example, nearly half of all women in the 'homelands' and about 15% of women in urban areas are illiterate, and in 1991, only 10% of women in South Africa had completed their secondary school education (Central Statistical Services, 1991). With regard to child care, a study in Soweto (Cock, Emdon & Klugman, 1986) indicated that 20% of mothers went back to work when their last child was less than two months old, and more than half when their last child was aged six months or less. The majority of these women were forced to pay for child care facilities outside of the family.

In addition to earning a living, urban women have to do their domestic chores and care for their children. The same Sowetan study found that the majority of working women 'worked' for 16-18 hours a day. In rural areas women are agriculturalists, in addition to which they have to collect water and fuel, do the laundry and cooking, and care for small children as well as the sick and aged. In one area of KwaZulu it was found that women had to walk 8 km to collect one headload of wood, an activity that took more than four and a half hours to complete (Wilson & Ramphele, 1989).

Black South African women are undoubtedly overworked, underpaid and insufficiently supported, both economically and in their job of caring for children, by either the men in their lives or by the State. Despite the hardships of single women, they nonetheless have the advantage of being able to make autonomous decisions about their income and their activities. Some studies indicate that children may be better off in women-headed households. For example, research in Kenya and Malawi (Kennedy & Peters, 1992) has found that some female-headed households with very low incomes have lower levels of preschooler malnutrition than higher income male-headed households. This is attributed to the fact that women tend to allocate proportionately more of their incomes to food and proportionately more of the total calories to child feeding. In addition, nurturing of children may be increased in female-headed households.

4 Vulnerable caregivers - vulnerable children

Despite the hardship of their lives, most South African women are trying to cope with these conditions. They make personal and physical sacrifices to earn a living, they rear their children as devoted mothers, and they maintain their homes conscientiously; many are also committed members of women's, church and community groups, which actively serve people in more precarious situations than their own. Nonetheless, hardship takes its toll on many South Africans, including women. A large number of black people interviewed as part of a national study complained of sleep disturbances (>50%), depression (31%) and tension (26%) (Olivier, 1989).

For some women, the load becomes too heavy. Their constant struggle, the scarcity of their social supports and their lack of prospects makes them demoralized, withdrawn and depressed. It is the resultant diminished capacity for supportive, consistent and involved parenting which primarily threatens the well-being of small children (McLoyd, 1990). The mediating link between caregiving and child effects, proposed here, is parental psychological distress originating from endemic adversity. Being part of the African culture, being black and politically oppressed and being poor does not necessarily imply that young children will be deprived of sufficient appropriate experiences to enable them to cope with the demands of formal education. Neither low social class, nor poverty, nor deprivation (vaguely defined), have been shown to have an inevitably negative effect on children's social or cognitive development (Richter, 1993). There has been, very rightly, a great deal of criticism of the assumption that poor people necessarily make poor parents who produce children with social and intellectual deficits (Oyemade, 1985).

It is often assumed that caregiver-child relationships in black cultures are different from those observed in the West and, implicitly, that they are not as good for children, particularly from an educational perspective. For example, Robert LeVine (1990) claims that mother-infant 'mock conversation' is a population-specific phenomenon which rarely occurs among non-Western societies. Some other studies of child development and early experience conducted in Africa have suggested that mothers might be unaware of, or unconcerned about, the need to stimulate their young children's development (for example, Goldberg, 1977). The home environment research conducted in South Africa, referred to earlier, challenges the generality of these impressions.

My own observations of interactions between black mothers and their babies over the length of the first year (Richter, Grieve & Austin, 1988) and of interactions between mothers and their malnourished and healthy children up to the age of three years (Richter, 1992b), have convinced me that mothers who are not psychologically distressed engage in playful conversations with their babies, and demonstrate affection, responsivity, sensitivity and child-centeredness in their interactions with their young children. In the first longitudinal study, 14 mother-infant pairs were videotaped during face-to-face interaction from 3 weeks to 52 weeks of age. The conditions under which interactions took place replicated those used by Colwyn Trevarthen in Edinburgh (see, for example, 1987), and included object play with a ring stacking toy. On the basis of microanalyses of 2-second intervals of mother-infant interactions in the second half of their first year engaged in a teaching task, we concluded that the structure of the processes involved in shared understanding and cooperation were the same amongst black South African dyads as those described in the West (Richter, Grieve & Austin, 1988). That is, mothers were sensitively responsive to their children's needs and level of skill, they adjusted their instructions and behavior to their children's increasing competence, and so on. In the second study, 26 malnourished children and matched comparison children from the same community were followed from 9 to 30 months of age and assessed, on both occasions, on a wide range of social, intellectual and emotional measures. Mother-infant interactions, during both structured and unstructured play, were recorded at both time periods and subjected to microanalysis. Interactional measures recorded at 9 months of age predicted outcome measures at 30 months among both malnourished and comparison children. That is, malnourished infants who enjoyed responsive relationships with their mothers were found, at 30 months, to show fewer ill-effects at 30 months than malnourished children who were not exposed to this kind of caregiving. Mother-infant interactions were found, in this study, to be statistically associated with rated poverty levels and maternal social supports (Richter, Bac & Hay, 1990).

This does not mean that African mothers engage in responsive, sensitive interactional behaviors with as much self-consciousness as Western mothers might. When I questioned mothers about their behavior, the majority stated that they had not previously been aware of intentionally teaching or interacting with their infants in the ways described. Nonetheless, I have observed the interactions between healthy black mothers and their children to be as vocal, playful, responsive and indulgent, as the interactions between Western mothers and babies videotaped in, for example, Oxford and Edinburgh.

There is wide agreement that socioeconomic and other stresses can adversely affect caregiving practices through the struggle, fatigue and demoralization which poor and disadvantaged women endure (Richter, Bac & Hay, 1990; Scheper-Hughes, 1985). Emotional withdrawal associated with pervasive low-level depression is one of the most common forms of psychological distress found among economically deprived populations who suffer chronic stress (Fried, 1982). Polansky, Borgman & DeSaix (1972) have suggested that, when faced with severe economic hardship, caregivers may become emotionally unavailable through defensive interpersonal detachment and immobilization (what they refer to as 'massive affect inhibition'). Mothers, overwhelmed by the immediate concerns occasioned by their social and economic circumstances, lack the energy normally available for investment in child care, and become emotionally detached and inaccessible to their children. They feel helpless and hopeless and lose any sense of confidence that they can do something about their child's health and development. They become resigned to the reduced options available in their lives and paralysed by their sense of futility about altering their restrictive circumstances (Fried, 1982).

Parental distress in the form of emotional detachment and depression is capable of affecting children's behavior through a number of routes, including seeing children's behavior in an increasingly negative light (Belle, 1990), being passive and inappropriate in interactions with children, and being punitive, inconsistent and unresponsive (McLoyd, 1992). Dix (1991) has proposed a model of parenting in which he argues that positive emotional states are vital to effective parenting. In parenting, argues Dix, emotions must be empathic, and organized to a large extent around concerns relevant to children's well-being and developmental outcomes. When invested in the interests of children, emotions organize sensitive, responsive parenting. Such emotional states promote surveillance of the child's needs, as well as the willingness and patience to comfort, encourage and teach young children. There is some support for these ideas in, for example, Osborn's (1990) contention that the results of the Bristol longitudinal study of disadvantaged children indicate that a critical element in childhood resilience is attributable, not to any particular care-giving behaviors, but to the communication of an all-pervading parental attitude of interest in, and devotion to, the child. It may be, however, that such parental attitudes are only expressed when the stresses associated with poverty are mitigated by compensatory positive influences, like inspirational belief systems, good interpersonal relationships and supportive family and friends.

A considerable number of women, especially those with severe economic pressures, find childrearing a draining and disheartening activity. Cleaver & Botha (1989), for example, found that 74% of the urban black women they interviewed in South Africa had negative or ambivalent feelings towards their babies. Most of the women found the lack of involvement on the part of the father, both financially and personally, to be the most upsetting part of motherhood. In a study of the effects of intervention among malnourished infants, Richter & Mphelo (1991) found that nearly 70% of the women admitted with their malnourished children to a rehabilitation unit, rated themselves as depressed. That is, physical and social conditions typically associated with childhood malnutrition, are also associated with negative psychological effects on caregivers.

A consciousness on the part of parents of the importance of their behavior to children's development, as well as a belief in their capacity to fulfill children's physical and emotional needs has been found, in several studies, to be the axis around which optimal child care takes place (Tinsley &

Holtgrave, 1989). These parental convictions, which entail a sense of pride in themselves and a belief in the meaning of their lives, are in turn, a reflection of the wider social relationships in which caregivers participate.

Of all things which economic stress, hardship and dependency do to people, the most pertinent to children is the threat they pose to adequate family and parental functioning. In this way, poverty, socioeconomic disadvantage, and social deprivation confer a general risk possibility on all children. However, it is likely that selective interpersonal and social experiences determine which children are vulnerable and which children remain resilient in the face of adversity. A caregiver's 'emotional availability' (Biringen & Robinson, 1991) to a child may be a critical mediating concept for understanding the effects of poverty and deprivation on young children.

In conclusion, it is possible that studies which suggest that cultural differences in early child care may contribute to later intellectual or educational problems experienced by children from developing countries may actually be documenting negative effects on parenting caused by poverty, stress and family disintegration, which can result in parental emotional disengagement from children. Observations of mother-child interactions in South Africa indicate great similarity between the behaviors of non-stressed African mothers with their young children, and those behaviors described as typical of middle-class Western mothers. Endemic stress impairs the capacity of parents to get involved with their children in ways which are known to promote intellectual development.

5 Social and cognitive foundations of learning

It is very clear that a large number of South African children experience educational problems. Firstly, children entering formal education are not necessarily ready for the curriculum of the first school year. A review of the results of South African studies showed that about one third of black children entering school in urban areas lack what are normally considered to be preschool skills, such as color naming and simple categorizations (Richter & Griesel, 1991). Secondly, failure during the first years of schooling is a significant problem; a study done in Soweto found that 63% of pupils failed at least once during their first three years of school (Gordon, 1986). Lastly, the majority of children drop out of school before completing their secondary education; the 1991 Annual Report of the Department of Education and Training reported that only 55% of an enrolled Grade 1 class are still in school by the end of primary school, and that less than 15% of the initially enrolled group complete secondary education. However, the education of black children is beset with problems, not the least of which have to do with the quality and availability of facilities and teaching. For example, the per capita expenditure on the education of black children in 1986 was only 20% of that spent on white children, and the pupil-teacher ratio in black schools was 1:41 as compared to 1:16 in white schools (South African Institute for Race Relations, 1990). In addition, the vast majority of black South African children have no access to preschools; many children are sent to school too early because their working parents have no other child care facilities; about a third of black children are undernourished (Hansen, 1984) and go to school hungry; and, there is no adequate screening and intervention for visual, auditory and other health problems (for example, helminths, malaria, iron deficiency) which may contribute to school failure and are potentially remediable.

It is not known what minimum experience is needed for normal human development to take place; what 'adequate facilitating environment' (Winnicott, 1965) is necessary for children, during their first few years of life, to develop a sense of competence, maintain curiosity, be motivated to succeed at what they do, be proud of their achievements, be able to cooperate with their peers, and have the necessary confidence and trust in adults to use them as resources in their endeavors to learn about the world around them. These are the capacities children need to be able to benefit from any form of education, including the kind that takes place in formal schooling. The South African studies quoted support the contention that all adequately functioning parents try to promote these capacities in children as part of the process of human socialization.

There is no certainty about which experiences and social properties foster and sustain these important, but ill-understood, intrinsic psychological constructs. Collectively, these capacities are referred to as functions of the self, of those systems that regulate affect and cognition. Self functions (amongst others, self-control, self-esteem, self-awareness, self-efficacy) begin to emerge during the second year of life (Kopp, 1982). The development of self functions are assumed to have their roots in features of very early caregiver-infant interactions, specifically to contingency between infant behavior and adult responsiveness (Tronick, Cohn & Shea, 1986). Experiences of contingency may become part of self functions through the internalization of affect states induced in recurrent interactions with caregivers. In the terminology of attachment theory, it is the development of a working model of the self and others. From this point of view, the social-emotional qualities of the attachment relationship are seen as external regulators of the infant's emotional repertoire (Sroufe, 1989).

Hartup (1985) has suggested that the cognitive functions most closely linked to social relationships are, what he calls, the 'executive regulators,' skills such as planning, monitoring and outcome-checking. His work suggests that securely and insecurely attached infants tackle tasks in quite different ways. Secure children engage in task behaviors more often and more enthusiastically, they exhibit fewer frustration-related behaviors (that is, they have more self-control) and they are better at initiating and using social input from adults. Similarly, in the follow-up study of malnourished children and comparison healthy children, referred to earlier (Richter, 1992b), insecurely attached children in both groups showed delayed self-recognition, more negative emotionality, poorer interaction with peers, more behavior problems like sleep disturbances, and were less likely to use their caregivers as a resource for encouragement, affirmation or help, than securely attached children.

Poverty and stress undermine effective parenting. These socioeconomic pressures diminish the capacity and motivation of caregivers to interact with children in ways which foster the social and intellectual faculties children need to benefit from education. Formal preschool training compensates for these deficiencies, but frequently does this in ways which are separated from family life and day-by-day experiences and which may undermine parental effectiveness and self-esteem. A priority in interventions should be to strengthen family life, provide supports for women and child care and strengthen informal systems of guidance and teaching.

6 Interventions to assist caregivers

It should be clear from the preceding discussion that interventions at a national level should be directed at correcting inequalities in education and providing preschool and child care facilities. Every attempt should also be made for supplementary feeding of young children and free health and mental health care for children. However, parents with few financial resources find it difficult to take advantages of services offered by separate organizations at separate times and in separate places. For this reason, as much inter-sectoral cooperation as possible should be mustered to provide comprehensive care and intervention for young children and their families. As paediatric primary care settings constitute the de facto social and mental health services for poor families, it may be advisable to coordinate interventions in concert with primary health care services.

In addition to the above, we need to assist caregivers by promoting family life, encouraging men to take responsibility for the well-being of their children, and decreasing the social isolation of especially vulnerable women and their children. In particular, women's education deserves urgent attention. Apart from the beneficial effects of women's education on childhood mortality, more educated women feel a greater sense of personal responsibility for their children, are less fatalistic and are more capable of negotiating within the modern world. It is also possible that the education of women, through increasing their social status, changes the traditional balance of family relationships and moves family values towards greater child-centeredness (Caldwell, 1981).

We should be especially wary of interventions which help children rather than families. Interventions of these kinds tend to further undermine the fundamental role that parents and other 'natural' caregivers play in their children's development. Despite good intentions to the contrary, many preschool programs in South Africa are directed specifically at children rather than families. According to the analysis offered here, the nucleus of interventions should comprise emotional, social and financial support for women and families so that they will be able to exercise appropriately their emotionally and culturally determined child care functions.

We should also attend seriously to the warning that much of what is done in current health care and education practice, consciously or unconsciously, ignores caregivers' needs and devalues their accomplishments. As Gerry Salole puts it "We have systematically allowed people to feel incompetent and inadequate in raising their own children. We have allowed 'modern' education to be juxtaposed to 'traditional' in such a manner that people are actually ashamed and unsure of their intuitive cultural skills" (1992, p. 7).

He maintains that we have over-emphasized the distinction between the informal education that takes place during children's socialization and the formal instruction that takes place in a classroom. The way people socialize their children leads to the development of capacities which are necessary for successful participation in formal education. Instead of trying to replace or compensate for what is believed to be inadequate socialization, we should be fostering or strengthening the ability of families and caregivers to provide the forms of socialization which are congruent with schooling. The best way to help children may be to help their natural caregivers and to strengthen the social systems of which they are a part.

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THE DEVELOPMENTAL NICHE: IMPLICATIONS FOR CHILDREN'S LITERACY DEVELOPMENT

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1 Introduction

Most theories of cognitive development focus on the child's construction of knowledge in particular domains, either as an isolated learner or in interaction with a more knowledgeable figure. More or less explicit in these theories is a proposition that normal engagement of the world by young children includes the construction of cognitive schemes and behavioral organization that correspond to the regularities experienced in everyday life.

In recent years, both constructivist (e.g. Piagetian) and interactionist (e.g. Vygotskian) theories of cognitive development have confronted the challenge of explaining development in the context of culturally varied environments. For Piagetian theory, based on a universal constructivist paradigm of development, the result has been to trim the broad generalizations about structural qualities of children's abstract knowledge. The failure of many children in non-literate societies to achieve 'concrete operational thinking' using the measures developed to test Swiss children, for example, has led not only to efforts to develop more appropriate measures, but also to modify assumptions about the relevance of this kind of thinking in everyday life (see Dasen & Heron, 1981; or Harkness & Super, 1989). For interactionist theories, on the other hand, the challenge of understanding child development in cultural context has led to an amplification of conceptualizations about the nature of the environmental input as a partner in the child's cognitive growth. Thus, the formative theories of Vygotsky, rooted in a historical-developmental framework, have given rise subsequently to cross-cultural comparisons of how children's learning experiences are systematically shaped by the normative experiences of daily life in their societies (see Wertsch, 1985). Scribner and Cole (1981), for example, have discussed differences in literacy development among rural and urban Vai people as they relate to the environments of daily life, while Rogoff (1990) has detailed the ways that interactions between children and their caretakers are culturally programmed to produce different kinds of learning experiences. Lave (1990) and Greenfield (1984) have also demonstrated culturally constructed learning processes through careful documentation of cultural practices that involve 'apprentices' and those from whom they learn.

Inherent, but rarely documented, in the interactionist approach is a recognition that children's culturally structured learning experiences are set within a larger framework of daily life that is also organized. Opportunities for child 'novices' to interact with adult 'experts' are indeed influenced by individual characteristics such as the personality and educational background of caregivers, and by immediate physical aspects of the surroundings such as the type of dwelling the family lives in and the activity schedules of others who live there. But more generally these opportunities are organized by the way such factors interact with each other as a system. Furthermore, the organization of any particular aspect of children's environments gains power insofar as it is replicated in a variety of different settings such as school, community and recreational settings. In order to understand the development effects of any one kind of learning experience, then, it is necessary to consider it not only in its *own* cultural context but also as part of a larger system of culturally organized experience.

In this chapter, we present a theoretical framework, the 'developmental niche,' that has been developed for studying the cultural structuring of children's environments (see Harkness & Super, in press; Super & Harkness, 1986). We attempt to describe this environment from the point of view of the child in order to understand processes of development as they are interwoven with the child's acquisition of cultural knowledge. In our most recent work with this model, we have focused on the role of parents' cultural belief systems (or parental ethnotheories) as a component of the niche, and how these are represented in the ways that parents organize their children's everyday experience. We will illustrate this approach, and its implications for understanding children's development in early childhood, literacy and pre-school with reference to research in communities in Holland, the US, and Kenya. It is important to point out that in no case do we propose that the cultural patterns described in any of these communities is 'average' or representative of the country as a whole; indeed, each community that we have studied is atypical in some ways. Our purpose in making cross-cultural comparisons based on community studies here is to identify cultural ideas and practices as they function in their own contexts, and to elucidate the implication of these for understanding child development.

2 The developmental niche

The developmental niche consists of three major subsystems which operate together as a larger system, and each of which interacts conditionally with other features of the culture. The first of these subsystems is constituted by the physical and social settings in which the child lives, including elements such as the size and composition of the household and daily routines of its members. Is the child born into a family with a mother, father, and one older sibling, or into a family including many siblings and half-siblings? Is the child cared for primarily by the mother for the first five years of life, or is the child herself a caretaker for a younger sibling by the time she reaches four or five years old? What kinds of activities engage the adults in the child's experienced world: weaving clothing for the family, planting and weeding crops, watching TV or mowing the lawn? Is the child's day structured around a regular schedule of activities, meals and rest or does it vary depending on the differing activities of others?

Observation of children's physical and social settings leads to the researcher's discovery, in a new or unexamined social context, of the second subsystem: culturally regulated customs and practices of child care and child rearing. Living in a small town in Holland in the spring of 1992, for example, led to our discovery of the 'three R's' of Dutch childrearing - *rust* (rest), *regelmaat* (regularity), and *reinheid* (cleanliness). Specifically, data from 'parental diaries' from more than sixty families in Bloemenheim (as we are calling this town) indicated that, without exception, all children through age seven years were in bed (having bathed first), virtually every night by 7:30. The families in our sample were all intact nuclear families with at least one parent employed outside the home, and the 'target' children were free of major health problems. Parents ranged in educational background from completion of vocational or 'household' secondary school to post-graduate degrees, and were employed in a wide variety of occupations from gardener or cleaning lady to executive, doctor or teacher. Most of the mothers were at home full-time with their young children. Some mothers worked part-time, and two were full-time, high-ranking executives (in government and banking). It was thus striking to find the cultural idea and practice of the 'three R's' represented across this broad spectrum of families.

As in this case of the 'three R's,' customs are sequences of behavior so commonly used by members of the community, and so thoroughly integrated into the large culture, that they do not need individual rationalization and are not necessarily given conscious thought. Although at the group level they can be seen as adaptations to the larger environment or ways of dealing with developmental issues, they are more likely to be regarded by members of the culture as the 'reasonable' or 'natural' thing to do, and this perspective may even be supported by 'scientific' opinion; in this case by advice from the *Consultatiebureau*. (It is interesting that the 'official' advice of the Consultatiebureau as centrally formulated now emphasizes other approaches to child-rearing; but that was apparently not the message received by the parents in Bloemenheim at their own visits to the local office). Whether consciously advocated or simply assumed as the only way to bring up children, however, customs of care are good targets for researchers interested in culture and development, or programmatic planners desirous of bringing about meaningful change in children's environments.

The developmental niche framework asserts that regularities in both the physical and social settings of daily life, and in customs or practices of care, carry cultural meanings that are evident to the growing child. But what is the origin of these systems? From the point of view of the child, the parents are an important source as they mediate the child's experience of daily life through their management of settings and implementation of customs. As Beatrice Whiting (1980) pointed out, parents may be most powerful as socializers of their children not through their own interactions with children, but rather in the ways that they assign children to different kinds of settings. While the Whitings (Whiting & Whiting, 1975) have suggested that parental assignment of children to settings is primarily a function of their own social and economic environments (e.g. the organization of adult work life and gender roles), we have become increasingly interested in parents' cultural belief systems as organizers of parental action. This approach recognizes the diverse economic, social and historic origins of parental thinking, but focuses on its directive function in structuring the child's immediate environment. Within the culturally structured context of the individual family, thus, we assign a leading role to parental ethnotheories as part of the third component of the niche, the psychology of the caretakers.

3 Parents' cultural concepts of the child

In recent years, we have undertaken studies in several different parts of the world on how parents think about children, families and themselves as parents. Our perspective on parents' thinking derives in part from anthropological advances in studying 'cultural models,' or shared understandings about the world including the self. Following the work of Quinn and Holland (1987, p.6), we see parental ethnotheories of the child as examples of cultural models that "frame experience, supplying interpretations of that experience and inferences about it, and goals for action."

Parental ethnotheories, as we have suggested elsewhere (Harkness, Super & Keefer 1992), are specialized cultural models, derived from more general models to deal with particular kinds of experience. Thus, for example, the American theme of 'independence' is pervasive in the culture, but is adapted in the context of parenting to thinking and action relevant to the management of infant sleep (see also Morelli, Rogoff, Oppenheim, & Goldsmith, 1992). The ways in which the general cultural model of independence is recruited for this special purpose is contingent on parents' knowledge of 'normative' cultural practices for putting babies to bed and encouraging certain sleep habits, as well as on their own remembered developmental experience and the particular characteristics of the child.

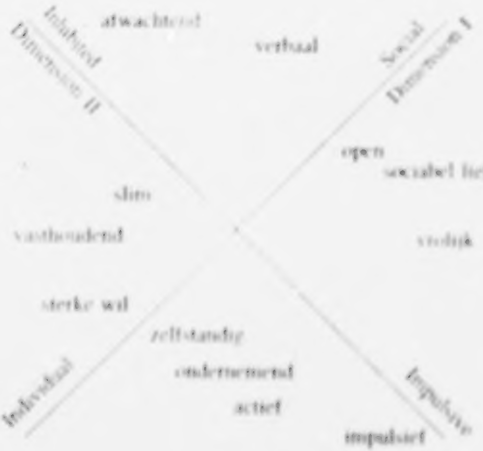
The connection between cultural models and the construction of 'goals for action' (see D'Andrade & Strauss, 1992) is an important one for our perspective, as it lays the foundation for studying the implications of parental ethnotheories for childrearing practices. Both cultural models and goals for action may be taken-for-granted ideas that arise from culturally constructed experience and go largely unchallenged in daily life. In contrast, when a parent confronts the need to produce new kinds of behavior directed by other cultural models, for example in the context of an early intervention program, there are many possibilities for mismatch between the parent's understandings and those of the intervention program or personnel. Specifically, a mother from a traditional non-Western society who is asked to play a school-like problem-solving game with her child while the program representative looks on is challenged to violate several cultural models: understandings of parent and child roles, ideas about appropriate activities for mothers, and rules of politeness to high-status visitors. Although the mother and the intervention program representative may both share a general motivation to develop the child's 'intelligence' in order to help the child be more successful in later life, their cultural models of what constitutes intelligence may differ fundamentally. Since many cultural models for appropriate parenting behavior are derived from these fundamental understandings, it is essential from both a theoretical and applied perspective to have a firm grasp of parents' cultural models of the child.

A new technique for studying parents' ethnotheories of the child that is proving very useful is the analysis of how parents describe their own children or children in their community, whether in group discussions, open-ended interviews or in response to direct questioning. Collection of this kind of data in several different cultural settings has given strong support to the theoretical assumption that parents' descriptions of their children are not completely individualistic productions, but rather reflect culturally shared ideas about which aspects of child behavior and personality are significant and/or desirable. The technique as we have developed it complements the work of Kohnstamm and his colleagues on the 'Five Factor Model' of adult personality as a possible universal reference frame (Digman, 1990; Kohnstamm, Halverson, & Mervielde, in press). The semantic space they describe may prove to be robust across cultures, and it may be generally organized as they anticipate, but our current work examines how within that space specific cultures differentially emphasize, connotate, and elaborate domains of special importance.

Briefly, our method consists of four main steps: 1) Elicitation of descriptive words or phrases (which we call descriptors) about children, through parental interviews or discussions with members of a defined social group or community of interest; 2) From the full list of descriptors, selection of a sub-set (usually 12 to 16) based on their frequency of occurrence in discourse, their apparent significance to parents in the community, and their distribution across the widest possible domains of meaning; 3) Construction and application of a triads test questionnaire based on the selected descriptors with a sample of parents in the community; and 4) Analysis of the results using multi-dimensional scaling, cluster analysis and consensus analysis to explore the organization of meaning and the degree of community consensus about that structure (for a fuller description of the methodology, see Harkness, Super, Van Tijen, & Van der Vlugt, 1993).

The results of this technique as applied to a sample of parents of children from six months to eight years of age in the town of Bloemenheim are shown in Figure 1. The descriptors are arranged here largely in two parallel rows distributed diagonally across the page. Two dimensions are evident. The first (going from upper right to lower left) contrasts individual to social qualities, with Clever (*slim*), Persistent (*vasthoudend*), Strong-willed (*sterke wil*), Self-reliant (*zelfstandig*), Enterprising (*ondernemend*), and Active (*actief*) on one side in contrast to Verbal (*verbaal*), Open (*open*), Sociable (*sociaal*), Sweet (*lief*), and Cheerful (*vrolijk*) on the other. Close to the median on this contrast but tying down the ends of the second dimension (upper left to lower right) are Cautious (*afwachtend*) and Impulsive (*impulsief*), signalling a dimension of contrast between impulsivity and inhibition. Interpretation of this second dimension is supported by the close proximity of Active and Enterprising to Impulsive; the proximity of Verbal to the opposite end of this dimension is less obvious but suggests that parents may think of children's talking as contrasted to being physically active.

Figure 1: Multi-dimensional scaling and cluster analysis of Dutch parents' descriptions



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Cluster analysis of the triads test results was also carried out; the circles on Figure 1 shows descriptors clustered together at an intermediate level of association (.59). At this level of interpretation, the most striking results are the associations between Clever, Persistent and Strong-willed in the Inhibited/Individual quadrant and Self-reliant, Enterprising and Active in the Individual/Active quadrant. A cluster of desirable social qualities (Open, Sociable, Sweet, and Cheerful) occupies the Impulsive/Social quadrant, while Verbal is isolated in the remaining (Inhibited/Social) quadrant. Consensus analysis of these results confirms that parents in this sample were in strong agreement about the patterns of association and contrast among the descriptors.

Of particular interest for the present context is how parents conceptualize children's intelligence. Interpretation of the Dutch results suggests that for these parents, intelligence is associated with individual enduring effort, directed by strength of will and organized by clarity of purpose (another definition given by parents in talking about children's 'will'). Intelligence, if this interpretation is correct, is not even necessarily related to verbal abilities; or at least talkativeness is not seen as an expression of intelligence.

The cultural distinctiveness of this particular construction of 'intelligence' becomes more evident when viewed in comparative perspective. Unlike other descriptors (such as Strong-willed, for example) which emerged as significant in some cultural contexts but not in others, we have found that parents in a wide variety of cultural settings choose to describe children in terms of some aspect of 'intelligence.' In the rural Kipsigis community of Kenya that we studied in the 1970s, for example, parents provided three different terms to describe children's intelligence: *ng'om* (smart), *kaseit* (understanding), and *kwelat* (sharp). Each of these terms has its own connotations, but a unifying theme among these as well as other terms is the idea of cultural competence as built on helpful and responsible behavior in the household context. Thus, as we have reported elsewhere (Harkness & Super, 1992, p. 377), one Kipsigis mother offered this description of intelligent behavior in children:

> "For a girl who is *ng'om*, after eating she sweeps the house because she knows it should be done. Then she washes the dishes, looks for vegetables [in the garden], and takes good care of the baby. When you come home [from the nearby

> fields], you feel pleased and say: 'This child is *ng'om.*' Another girl may not even clean her own dishes, but just go out and play, leaving the baby to cry. For a boy, if he is *ng'om*, he will watch the cows, and take them to the river without being told. He knows to separate the calves from the cows and he will fix the thorn fence where it is broken. The other boy will let the cows into the maize field and will be found playing while they eat the maize."

In contrast to both the Kipsigis and Dutch cultural constructions of 'intelligence,' American parents in two distinct geographic areas (metropolitan Cambridge, Massachusetts and central Pennsylvania) highlight the aggressive and competitive aspects of intelligence, and interpret many diverse aspects of behavior as manifestations of intelligence. Preliminary analysis of the frequency of this kind of descriptor in discourse by middle-class parents in the Boston area suggests that it is by far the most common of descriptors used by parents to talk about their own children, accounting for almost a quarter of all descriptors (excluding immediate repetitions) in contrast to less than half of that for the Dutch parents. For American parents in central Pennsylvania, 'smart' is closely associated with 'athletic,' capturing both the competitive aspect of intelligence as a means of achieving success, and also the local cultural model of athletic prowess as itself a demonstration of cultural super-competence (Raghavan, Harkness & Super 1993).

In summary, parents' descriptions of their children in several different cultural communities indicate cultural patterning of concepts of the child. While concepts relating to intelligence seem to be important to parents in all groups we have studied so far, the patterns of association between terms for intelligence and terms denoting other qualities, as well as the frequency of use and elaboration of this semantic domain, indicate rather different cultural concepts of what it means for a child to be intelligent. However defined and connoted, words in this domain have the common characteristic of indicating culturally desirable competence. We suggest that the ways these terms are used in natural discourse as well as in formal methodologies (such as the triads test) reveal how parental actions in a variety of settings can all be oriented toward encouraging the development of 'intelligence.'

4 The instantiation of parents' cultural belief systems in customs and practices of care

How do parents convey their ideas about desirable development to their children? Although they may occasionally express their hopes and fears directly, more often these are communicated implicitly, through repeated actions and routines. Moreover, parents' cultural belief systems, like other aspects of the child's developmental niche, are likely to be experienced by parents as the 'normal' or 'natural' way to think and act. Thus it is that customs or practices of care take on particular significance as vehicles for parents to express or 'instantiate' cultural beliefs, often themselves unexamined, through actions.

In making the argument that customs and practices instantiate parental beliefs, it is important to note that we are *not* proposing that particular beliefs are direct predictors of particular actions; and we are especially not suggesting that a generally stated parental belief will predict parental action in any given situation. As previous research has shown, the relationships between parental beliefs and behavior are considerably more complex than this (see Sigel, McGillicuddy-DeLisi & Goodnow, 1992). What we are suggesting is that certain cultural practices are motivated and sustained by parental belief systems. This is an important point for the researcher whose goal is to understand the functions of certain practices to their participants (whether parents or children). It is equally important for the intervention expert who wishes to introduce some kind of change related to practices of childrearing - a point we shall return to in the concluding section of this chapter.

The instantiation of parental beliefs about children's intelligence in customs and practices becomes clearer if we review differences in practices among the three groups we have discussed. For Kipsigis parents, first, training for the development of intelligence in the form of helpfulness and responsibility starts early in life - around the age of two years. By the time children are six years old, they are routinely engaged in a variety of responsible chores including care of infant siblings, animal herding, and cooking over an open fire. Systematic observations of these children showed that these kinds of activities occupied approximately half the children's waking time by the age of six, with the remainder divided between rest and sociability (Harkness & Super, 1983). The Kipsigis cultural belief about the importance of work in forming a competent adult is so strong that last-born children, who are characteristically required to do less work early in life, are expected to be somewhat 'spoiled' and irresponsible as adults.

For parents in Bloemenheim, customs of care regarding the development of intelligence were a topic often discussed in our interviews. The dominant advice, voiced by many, was "You must not push!" Parents who were somewhat familiar with American culture liked to make the distinction between this stance and what they saw as the American way. What could a parent in Bloemenheim do to encourage the optimal development of the child? A theme emphasized by many parents was the importance of 'regularity' (*regelmaat*), the second of the 'three R's' mentioned earlier. Through the provision of an environment characterized by regular schedules and regular rules, parents explained, children would naturally learn about 'where they stood,' or about their own place in their social worlds. Secure within the 'borders' (*grenzen*) set by this regularity, children would then be free to explore their own interests and develop their own competencies. Regularity, in this cultural view, had the essential function of providing the scaffolding upon which new experience and knowledge could be built. In addition to structuring time, the Bloemenheim families also provided 'scaffolding' for development through careful structuring of the physical environment, including a 'play corner' in the family living-room equipped with child-sized table and chairs, art supplies and toys. In these settings, children could entertain themselves while occasionally interacting with adults nearby.

American parents' concerns about the development of intelligence (a central concern, given the frequency with which they referred to it!) focused on rather different customs. For the Cambridge parents, two issues emerged as especially important: the provision of sufficiently 'stimulating' environments in children's daily routines, and the experience of 'special time' for children with their parents. A variety of practices were carried out to address the first issue, including provision of large stocks of toys, careful choice of child care arrangements, and organized trips to museums, the theater, or lessons to develop special skills. The second kind of practice, 'special time,' was conceptualized as time spent on an activity, preferably educational, to be engaged in by one child in the company of a sole adult who would devote his or her entire attention to the child. In talking about the importance of 'special time,' parents emphasized its role not only in promoting the child's cognitive development but also in the development of self-esteem. We gained new insight into the cultural meaning of this custom by asking parents in Bloemenheim to comment on it; their response was generally that they did not find 'special time' an important custom in their own families; interestingly, the Bloemenheim parents were also not particularly concerned about the development of self-esteem in their children - in fact, we had several discussions with families about how one would translate this term from English to Dutch. In reflecting on the blending of themes of intelligence and self-esteem in the American parents' talk about special time, it becomes clear that the association of intelligence with competition in the American context is significant. Many aspects of socialization in American life are framed in terms of competition for limited resources: winning a prize as an outstanding student, gaining a place on the varsity sports team, being admitted to the best university or being chosen for an executive position in a corporation. The stakes are high: for those who succeed, social recognition and material wealth; for those who do not, humiliation and the lack of even basic resources such as a decent standard of living and primary health care. In order to be able to compete effectively in this environment, parents may believe, children must have enormous amounts of faith in their own abilities; and the instillation of this faith can never come too early or be stressed too much.

In making the above comparisons between the Bloemenheim and the Cambridge parents, we do not mean to suggest that parents in each community followed completely different practices of child-rearing. For example, parents in Bloemenheim provided toys for their children, read books with them and sometimes took them on educational outings such as visits to museums. Likewise, the Cambridge parents were not unconcerned about providing a reliably regular routine for their children. The difference between these two groups lies, first, in the relative emphasis that parents in each community placed on the importance of themes such as 'regularity' versus 'stimulation,' and secondly, on the cultural meanings that were bestowed on certain kinds of practices such as the creation of a regular schedule or spending 'special time' with a child.

5 Developmental effects of parental ethnotheories and practices

What are the effects of parents' cultural belief systems and their instantiation in particular childrearing practices? Given the multiple differences that can be observed in the development of children in different cultural groups, we can assume that the effects are pervasive; yet they are complex. Certain differences in *behavior* of children in different cultural settings are easily identified. For example, we have described how young children in Kokwet performed poorly on a cognitive test that involved retelling a story to the tester, and we have related this to child language socialization in that setting (Harkness & Super, 1982). Returning to the example of the 'three R's' of Dutch childrearing, preliminary analysis of behavior observations on 6-month-old infants indicates that the cultural practice of 'rest' is reflected in both a greater total amount of sleep as well as a more quiet, as opposed to more active, state of arousal, in comparison with an American sample. When we consider an issue such as the development of literacy that relies on a wide variety of skills and attitudes, however, it is considerably more difficult to trace developmental outcomes to particular practices or beliefs.

Does this mean that parental beliefs and practice don't make any difference? On the contrary, the difficulty of tracing complex developmental outcomes to specific kinds of input signals the important fact that particular practices are effective insofar as they participate in larger systems of cultural meaning. As we suggested in the beginning of this paper, it is the redundancy in the structure of the child's experience of daily life that gives power to the cultural messages inherent in particular kinds of events. The immediate provider of coherence among these events is parental belief systems. Thus, while particular practices, by themselves, do not lead to general developmental outcomes such as literacy development, they are important both to the researcher and the interventionist as entries into the larger developmental niche that structures the child's possibilities for development within the broader constraints of species-specific and individual capacities.

6 Parents' cultural beliefs and practices: implications for early interventions promoting literacy

The research we have discussed here was with groups that, in the eyes of their own cultures, were not in need of remediation: middle class Dutch and American families, and relatively prosperous Kenyan farming families. Nevertheless, we can draw some implications for the application of the perspectives and methods described here to interventions with young children and their families.

First, in order to intervene effectively for the enhancement of literacy in the pre-school years, it is essential to be familiar with parents' concepts of the child. This point is as true at the level of individual families as it is at the group level. Because, as we have noted, so many cultural beliefs about the nature of the child are unexamined assumptions about what is 'normal,' there is a danger that the interventionist may approach parents with *a priori* ideas about what kinds of beliefs parents have or ought to have. If the target group for intervention comes from a different cultural tradition, these assumptions are likely not to be shared - even if the group in question has been living in the present environment for some time. If the family *is* part of the same cultural group as the interventionist, there is still a real possibility that ideas about the child may differ. We found among the Bloemenheim parents, for example, a small number who expressed ideas about children's development that sounded more like American ideas in some respects; and conversely, we ourselves (as parents) identified more with some beliefs expressed by Dutch parents than with our American samples. Assumptions about the nature of the child, the family and their joint development should always be re-examined at the individual level, as well as within the group, in order to design an intervention that adequately takes them into account (see Super & Harkness, in press).

Second, the design of effective interventions for literacy enhancement also requires that customary practices be reviewed as they relate both to parents' and interventionists' cultural concepts of the child. Given the fact that children in both the American and Dutch samples were already making successful transitions to pre-school and school, it is evident that there are multiple routes to successful early literacy. Yet each group violated certain premises held most dear by the other. In order to intervene effectively with a variety of families, it is necessary, then, to set aside assumptions about the importance of particular practices and consider what *other* practices might be equally effective in communicating cultural knowledge relevant to literacy skills.

Finally, the developmental niche framework that we have used here suggests that one must look not only at how parental ideas are formed and communicated to children, but also how they resonate with cultural conceptions of the child instantiated in other institutions of socialization such as schools or health care systems. The power of culture in socializing children lies not only in *how* ideas are represented, but also in ***where*** they are represented. Like language systems, cultural systems are characterized by redundancy; the same information is conveyed through various modes or channels. When cultural concepts of the child expressed in schools conflict with those held by parents, this principle is violated and the result is confusion and, ultimately perhaps, disengagement, failure or the development of anti-social behavior. Successful interventions with families, thus, need to incorporate a reexamination of cultural belief systems and their customary expression in the institutions that serve those families, as well as in the families themselves, [illegible] that beliefs and practices throughout the child's developmental niche can support and enhance each other.

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LINGUISTIC DEVELOPMENT AS RELATED TO LITERACY

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1 Introduction

The basic premise of this chapter is that literacy development and school success are most effectively promoted during the preschool period by attention to the development of oral language skills. While it might seem logical to assume that ultimate success in literacy would be promoted by early facilitation of literacy skills, in fact I will argue that premature attention to the skills typically subsumed under the rubric 'emergent literacy' can impoverish the child's access to experiences which help develop much more crucial oral language skills.

The chapter is organized in the following way: First, I will sketch my basic model for the emergence of literacy, and explain how oral language skills play a role. Second, I will outline a model for the emergence of language, and summarize evidence about the social-interactive experiences that support optimal oral language development. Finally, I will discuss the ways in which the social-interactive environments of preschool children particularly in group settings can be designed to optimize those aspects of language development most relevant to later school performance.

2 A model of reading

The model to be presented presumes the necessity of a componential analysis of both language and of literacy (see also Snow, 1991a, b, c, and Snow & Dickinson, 1991, for more extensive presentations of the componential model). Whereas literacy skill is often represented in educational research by a single number a score on a test, or the grade-level at which a child is reading in fact, I argue reading should be seen as a set of skills, each of which could be assessed independently, and all of which may have somewhat different developmental histories.

Skilled reading requires the integration of many individual skills, including at least the following:

- rapid letter recognition,
- automated word recognition,
- accessing word meaning,
- syntactic processing of sentences,
- processing of discourse markers and cohesive relations among sentences,
- extraction and evaluation of new information,
- integration of new information with previously stored information,
- identification of authorial stance and perspective, and
- development of a reaction to the material read.

In addition to these reading skills, efficient reading also requires metaliteracy skills identifying what sort of text one is being exposed to; deciding whether one wants to study it deeply or scan it, read it for knowledge or entertainment, take it as literal or as evocative. The array of skills involved in reading makes clear that individual readers might be much better at some aspects of reading than at others.

At the early stages of reading development, many of the skills listed here are unnecessary to adequate performance. A second or a third grade reader is not expected to read words or process information from texts that go beyond what is already under the child's control orally. Beginning reading texts use words that children already know whereas older readers often encounter in print words they have never heard and would not use orally. Beginning readers are exposed to simple stories or expositions about familiar topics, not to novel information or new ideas.

Nonetheless, though, even young readers must integrate an array of skills to be effective users of literacy. These skills can be thought of as falling into three categories:

Print skills

Print skills are those most closely related to the writing system itself, e.g. recognizing letters, being able to write one's own name, recognizing words frequently encountered in the environment such as Coca-Cola or MacDonald's, and sounding out simple words. Young children growing up in highly literate environments practice print skills with alphabet blocks, plastic 'refrigerator letters,' and while being read to from picture books, particularly alphabet books. Many children, however, only have the opportunity to develop print skills when they are first exposed to formal schooling.

Language analysis skills

Units of print, in any kind of writing system, map onto units of language. The most transparent mappings are from logograms to morphemes, as in Chinese. Mappings from spoken syllables to syllabic script units, as in the Japanese syllabaries, are also relatively accessible even to young children, because syllables are psychologically real units of speech production; even two year olds can learn to segment their speech into syllables. The most difficult language analysis task is posed by the need to segment speech into phonemes most of which are unpronounceable in isolation for mapping onto letters in an alphabetic system. The accomplishment of phoneme segmentation is a prerequisite to understanding the nature of an alphabetic system, and to being able to benefit from instruction using methods like phonics. Phoneme segmentation is typically assessed by asking children to produce rhymes, or to pronounce words without the initial or final sounds (e.g., What's Fred without the 'fff'? What's bark without the 'k'?). In addition to the difficulties of phoneme segmentation, though, young children are often baffled by the status of function words, by the meanings of terms like 'word,' and by aspects of written language that deviate from spoken forms ('want to' instead of *wanna* or 'would have' instead of *would of*, for example). Segmentation and language analysis skills are developed in the context of talk about language, exposure to rhymes, alliteration, and play with language, and during spontaneous playful writing activities.

Culture of literacy

In addition to skills with print and skills in analyzing language so as to understand the relation of oral to printed forms, children who are going to be successful in learning to read need to understand what reading is all about. They must understand that reading and writing are communicative activities, and that distanced communication is different in some ways from face-to-face communication. They need to have some sense of the sorts of functions that print serves, that books can amuse and entertain, that reference books are organized differently from books of fiction, that one can seek information or learn new things from books, magazines, and newspapers, and so on. Children growing up in literate households have many opportunities to observe how adults use print, but some children arrive at school and are plunged into reading instruction with little understanding of the ways in which knowing how to read will benefit them. This becomes a particular problem if early reading instruction is heavily focussed on the mechanics of decoding, with little attention to meaning.

The major argument to be made in this paper is that these three domains of literacy skills, assuming normal age-appropriate cognitive and linguistic skills, are adequate for initial reading success. However, as children get older and are expected to read ever more challenging material, we argue, these skills are not enough. Children need high levels of language skills in particular, skills with what we call 'decontextualized language,' in order to become fully proficient readers and school learners.

Decontextualized language skills are prerequisite to high levels of literacy because decontextualized oral language tasks conform to the same rules as literate language use. Certain oral language tasks depend heavily on the pragmatic skills of the conversationalist, e.g. reacting to the interlocutor, exploiting shared experiences, utilizing backchannels, questions, and comprehension checks (Schley & Snow, 1992). Other oral language tasks require recognizing the reality (or maintaining the fiction) that a) one's audience is distant, unknown, and nonresponsive, b) one cannot presume shared background knowledge with the audience, and c) full comprehension of explicit information by the audience is the goal (De Temple, Wu & Snow, 1991, Snow, 1990). The pragmatic demands of this second set of oral language tasks is much more similar to the demands of literate discourse. There is considerable evidence that children who do well in literacy achievement have higher levels of control over these pragmatic orientations in oral contexts (Snow, 1990; Snow, Cancino, De Temple & Schley, 1991, Snow, Cancino, Gonzalez, & Shriberg, 1989).

Vocabulary and world knowledge are also crucial to advanced literacy achievement. In fact, the best single predictor of reading success is vocabulary size (Anderson & Freebody, 1981); this relationship probably reflects the role of more than just simple word knowledge, though. Knowing words is an index for knowing about the world, and wide-ranging world knowledge may be the more important route to literacy success. As noted above, early reading texts are largely limited to words present in children's oral vocabularies. More advanced literacy achievement, though, requires understanding relatively rare words and understanding texts about complex matters. Previous oral exposure to these words and to relevant background information greatly increases children's comprehension of these texts. It is possible, of course, to acquire new vocabulary through reading. Probably the vast majority of the vocabulary items of literate adults were first learned from text. Such learning, though, also requires an analytic orientation to word meaning and efficient strategies for comprehension from partial information (Snow, Barnes, Chandler, Hemphill & Goodman, 1991).

3 The emergence of oral language skills

It is possible to sketch out the emergence of language along many different dimensions increasing control over adult rules for phonology, morphology, and syntax, for example, or expanding knowledge of vocabulary. The dimension most relevant to literacy and school success is the pragmatic dimension increasing control over the *appropriate use* of language in a variety of situations (Snow, in press, b). Consider the linguistically sophisticated two-year-old: she can talk comprehensibly about what she is doing, the objects that are present in the room and events that occur in the present or immediate past. Her talk occurs in the context of conversations with familiar adults, adults who support the child's language performance by asking appropriate questions, filling in missing information, offering interpretations that clarify imprecise utterances, and in other ways scaffolding the child's contribution. The young child's talk is effective because it is contextualized spatially, temporally, and conversationally. Even sophisticated two-year-olds cannot report about past events in extended discourses without prompts and support from an adult, nor explain complex matters, nor even in most cases talk comprehensibly to strangers.

By about age three, though, children begin to display appropriate and communicatively effective speech in situations and about topics which are increasingly decontextualized. Over the course of the next several years, children continue to develop these skills. They come to be able to talk about spatially distant objects and places, about abstract entities, even about fantasy. They start to talk about distant past and future, and about hypothetical and contrary to fact conditions. Perhaps most relevant to literacy, they come to be able to construct extended discourses autonomously, without depending on the collaboration of an adult to help provide global structuring, to ensure completeness of information, or to repair miscommunications. The acquisition of the language skills needed to serve these decontextualized functions has been only sketchily studied, so it is difficult to provide norms for the ages at which they are acquired. Indeed, these skills are very likely subject to considerable variation in age of acquisition, as a result of variation in the social, linguistic, and educational experiences available to different children. Some may never be fully acquired by most people; it is clear that even highly educated adults often fail to meet fully the complex demands of decontextualized language tasks, as attested by the persistent need to edit and revise their written productions.

Certain formal aspects of the language system must develop to support these decontextualized uses of language: past and future tenses, perfect and progressive aspects, and subjunctive mood, for example, are crucial to representing complex temporal and conditional relations; sophisticated vocabulary items must be acquired to support discussion of abstract topics; and devices for establishing relationships across utterances, such as anaphora, ellipsis, and conjunctions, must be acquired to maintain cohesion in extended discourses. An important question to consider is where children learn these more sophisticated aspects of the language system. What sorts of social interactions support these developments?

Linguistic input of a sufficiently clear, rich, and interpretable type is prerequisite to the development of an adequate phonological and grammatical system, but these two systems also show characteristics suggesting they are relatively buffered against impoverishment of the linguistic input (Snow, in press, a). That is to say, only rather severe disruption of the social environment (extreme isolation or profound deafness, for example) causes deficits in the acquisition of basic vocabulary and grammar. Lexical and pragmatic development, on the other hand, are massively susceptible to environmental influences (Snow, 1989). These systems show very large social class differences (Dickinson & Snow, 1987), and readily show consequences of interventions (e.g. enriched preschool classrooms) as well (Cazden, Snow & Heise-Baigorria, 1991; De Temple & Beals, 1991; Dickinson & Smith, 1991; Dickinson & Tabors, 1991; and Snow, 1991c).

Continued acquisition of vocabulary as well as the acquisition of control over the more sophisticated uses of language in decontextualized situations seems to be quite heavily dependent on children's access to particular social-interactive contexts; clearly, if we can identify these, we can help to ensure their availability to all children through parent education programs or the design of group care settings.

Certain home and preschool classroom factors can be shown to promote both the pragmatic orientations and the vocabulary and world knowledge crucial to literacy. It is widely attested that book-reading, particularly dialogic book-reading, promotes young children's language and preliteracy development (see Goldfield & Snow, 1984, and Debaryshe, 1993, for reviews). The Home-School Study of Language and Literacy Development (Snow, 1991c) has sought sources of continued language development in a group of low income American preschoolers. Results from the study suggest that, in particular, engagement during book-reading in talk that goes beyond the immediate demands of the text, to include inference, prediction, and connection to world knowledge, promotes vocabulary acquisition and story comprehension (De Temple & Beals, 1991). The following conversation between a three-year-old and her mother is an example:

Child: Why she going to eat Hansel and Gretel?
Mother: Because she was hungry.
Child: Why was she hungry?
Mother: Because she didn't have any food.
Child: But that's not food!
Mother: I know it's not food.
Mother: But she was a mean old witch and she ate little girls and boys.

In addition, participation in family conversations that include stretches of connected discourse, e.g. narratives or explanations, helps children acquire the linguistic devices needed to express the pragmatics of distanced communication (Beals, 1991), as revealed in effects two years later on the quality of children's extended discourse in narratives and definitions (De Temple & Beals, 1991). The following conversation between a mother and her daughter about a trip to an amusement park shows how adult support can expand a child's story-telling effectiveness:

Mother: Did you have fun at the park?
Child: Yes.
Mother: What did you do at the park?
Child: We went on rides and we had fun.
Mother: What kind of rides.
Child: Um, the rollercoaster.
Mother: Who went with you?
Child: Carmen, Greg, Mommy and Daddy and Teddy and Earl.
Mother: How did you get there?
Child: Some people went in my Daddy's van.
Mother: Did you play games?
Child: Yes.
Child: Then you said we can go on one more ride and we went on the one that inside it, it goes up and down.
Mother: The bubble boat.
Child: Yep, and we had fun and Carmen said 'let me get off this thing!'

Maternal use of talk about scientific processes, hypothesis testing, and prediction of likely events during play with a magnet related to children's control over the production of extended discourse (Snow & Kurland, in press). This kind of talk constituted only a small percentage of the talk recorded during play with the magnet, but its similarity to the kind of talk children will encounter in classrooms is striking:

Mother: Those keep sticking to it, huh?
Child: Mm hm.
Mother: You know why?
Child: Why?
Mother: Think.
Mother: What do you think is inside that black box?
Child: Metal?
Mother: What?
Mother: We've talked about this before.
Mother: What's inside?
Mother: That makes everything stick like that?
Mother: Like on our refrigerator?
Child: Magnets.
Mother: Very good.

Furthermore, the use of rare, sophisticated vocabulary items by family members related to children's scores on the Peabody Picture Vocabulary Test as well as to the sophistication of the definitions they offered two years later (Beals & Tabors, 1993). Sophisticated vocabulary was often encountered during family mealtime conversations that also included narratives or explanations, like the following discussion of dolphins, mammals, and respiration:

Father: Now, you know what a dolphin is, don't you?
Child: Yeah!
Father: A dolphin doesn't have to stay in the water all the time.
Child: Yeah!
Father: A dolphin can come up, a dolphin is a mammal.
Child: Yeah!
Father: And a mammal, they live in the ocean but they can breathe our air.
Child: Yeah!
Father: A whale - a big, big whale?
Father: See the big whales? Like in Pinocchio the big whale?
Child: Yeah!
Father: That's a mammal.
Father: It's not a fish.
Child: Yeah!
Father: It lives in the ocean like a fish but it's a mammal and it can breathe our air.
Father: A fish can't breathe our air.
Child: Yeah!

The relationships we have found between aspects of family talk and child language outcomes become particularly important precisely because those language outcomes will be the key to children's literacy success during the later grades of elementary school.

4 Implications for design of preschool classrooms

Preschool classrooms or group care settings can provide many of the same language enrichment experiences of the best homes, but many do not. In careful analyses of the preschool experiences of a sample of low-income, American children, half attending Head Start (the same children whose home experiences were reported above), Dickinson and his colleagues have found certain settings and certain kinds of talk that promote children's vocabulary and their extended discourse skills. During large group settings, a common preschool activity is reading books with children. As at home, book reading at preschool promotes language and literacy skills. Dickinson and Smith (1993a) have found, though, that not all styles of book reading work equally well. A didactic style, in which teachers regularly probe for children's literal comprehension of the text, is less productive than a performance-oriented style, in which teachers read dramatically with relatively few interruptions, then engage in discussion afterwards (when it does not disrupt the flow of the narrative that is less tied to specific textual details). The strongest single predictor of children language outcomes from the book-reading sessions was the percent of 'child-involved analytic talk,' or teacher talk that went beyond literal comprehension questions to include non-immediate topics and in which children were actively and enthusiastically involved.

Beyond book-reading, many large- and small-group activities typically are planned for preschool settings. Do some of these settings have more value than others for children's development? Dickinson's findings (Dickinson, in press; Dickinson & Smith, 1993b; Dickinson & Moreton, 1993) suggest that small group activities - one teacher working with three to six children - are the most productive in terms of long-term language outcomes. The percent of cognitively challenging talk was also positively related to language outcomes - talk that was coded as cognitively challenging was, of course, likely to occur during small group activities, and less likely to occur when children were playing without an adult present. On the other hand, at least three year olds seemed to benefit from the opportunity for pretend play; percent of time in pretend play at three related to language and literacy outcomes. This finding might reflect the contribution of child language sophistication the more sophisticated three year olds were more likely to engage in pretense, and more likely to score well two years later. Finally, Dickinson and his colleagues found that the amount of time teachers scheduled for free play was negatively related to long-term outcomes, while the presence of an explicit pedagogical focus on language and literacy had a positive effect.

5 Implications for the role of parents

Our focus on ways to provide language-enrichment activities in the context of preschool programs or group care settings reflects the widespread use of such programs to 'compensate' for perceived inadequacies in the quality of interaction in the home. In fact, most parents are capable of providing linguistic environments in the home that are enriched enough to support their preschoolers' development of the decontextualized language skills. The failure of impoverished and poorly educated parents to do so may reflect their absorption in the more pressing demands of ensuring basic care to their children, rather than neglect of linguistic and cognitive development. If, however, parents do not understand the importance of extended language interactions with their children, then home-based intervention programs designed to alert parents to the value of such interactions can be helpful. Like classroom-based interventions, though, such programs may be a waste of time if they focus on 'academic skills' (alphabet, counting, colors) rather than on the opportunities for extended discourse provided by story-telling, fantasy play, book-reading, and discussions of ongoing events.

What is the role of parents in supporting their preschoolers' language development if the children will attend school in a language different from that spoken at home? A very large percentage of young children in the world today speak one language at home and another at school; it is perhaps not surprising that many parents attempt to help prepare their children for school by switching to the school language at home. Such a strategy is, however, counterproductive unless the parents speak the school language very well; if they speak the school language poorly, they will be unable to provide the interesting discussions, the elaborated narratives, and the sophisticated vocabulary children require. Their children will have some familiarity with the basics of the school language, but not with the decontextualized extended language skills they most desperately need. On the other hand, if children acquire the pragmatic rules underlying decontextualized language in their first language, they will be able to use those skills in a second language (Cummins, 1991; Lanauze & Snow, 1989).

6 Conclusion

Literacy requires print skills, language analysis skills, cultural understandings, and control over the production and comprehension of extended discourse and complex vocabulary. Successfully literate individuals control the ability to interpret print, an understanding of the language structures that are utilized for literate purposes, and an understanding of the broader cultural purposes and meaning of literacy. Educators, particularly preschool and primary school educators, often ignore or presuppose the linguistic and cultural understandings, to focus on teaching print skills. In fact, for children who have arrived at school with little previous exposure to a wide variety of literacy activities, children who have had little chance to develop the language skills and world knowledge crucial to literate use, these two components of literacy are considerably more challenging and troublesome than is the task of acquiring orthographic and word-reading skills. Paradoxically though, they often receive very little teaching focussed on these challenges.

Focus in literacy preparation programs on print skills, phonics, numbers, and colors diverts attention from activities that develop competence with complex, connected discourse designed for a distant audience. Compensatory preschool curricula tend to devote a great deal of time to teaching the alphabet, perhaps some letter-sound combinations, and basic vocabulary or concepts it is assumed are important for school. Some parent education programs display the same limited focus. Exposure of preschool-aged children to the language structures necessary for communicating effectively with a distant audience with whom background knowledge is not shared would be much more valuable, as would exposure to rich vocabulary and information structures. Activities that support language and literacy development include, in addition to dialogic book-reading, discussions around science, cooking, or construction projects, development through adult intervention of naturally occurring sociodramatic play, projects such as making videotapes and writing letters to send to 'distant audiences', and encouraging children to tell, act out, and dictate stories. Teaching the print skills needed for literacy can safely be postponed until children are six or seven; the preschool years should be reserved for language-rich experiences, for story-telling, fantasy, and learning about the world.

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HOW PARENTS PROVIDE YOUNG CHILDREN WITH ACCESS TO LITERACY

SOCIO-CULTURAL DIFFERENCES IN LITERACY RELATED PARENT-CHILD INTERACTIONS

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1 Introduction

Early differences in cognitive and language skills and social-emotional dispositions between young children from different social and ethnic backgrounds, should be a major concern. The reason is simple. In formal education, these early differing ways of intellectual and social-emotional functioning are transformed into educational lags. This is already observable at the very beginning of children's school careers in first grade of primary school. Furthermore, these early educational lags do not disappear in education, but tend to increase. For reading instruction Stanovich (1986) coined the term the Matthew effect to describe the mechanism that seems to be so characteristic of the educational careers of children from different socio-cultural backgrounds in many countries: the rich will get richer in education, the poor poorer.

On closer scrutiny, research into school careers shows that the socio-cultural background's direct influence on school success is great at the start of educational careers, but modest at later times (with a few exceptions when, for instance, parents have to make choices on the school or type of secondary or tertiary education; cf. Leseman, 1989). In later grades, previous school achievements are by far the strongest predictors of subsequent school performance. The Matthew effect, therefore, seems to be rooted essentially in the students' learning abilities, in their skills to profit from instruction.

It is an intruiging question why some students - those more forward at the start of an educational program - apparently learn more from the same instruction than others, those who were already lagging behind. Two complementary answers can be given. The first holds that most current educational programs in primary schools do not teach essential knowledge and skills for diverse learning domains, especially reading comprehension and functional, communicative and argumentative writing. For example, with respect to literacy education it has been stated that educational programs are overly focused on teaching the 'technical' rather than the 'cognitive', 'epistemological' and 'motivational' requirements for reading comprehension and functional writing (cf. Wells, 1987; Gardner, 1990; Resnick, 1990). This is in line with findings in nation-wide assessment studies of literacy skills and other major surveys (cf. Kirsch & Jungebluth, 1987; Ortiz, 1989; Wijnstra, 1992; Leseman, 1993a). Although a small proportion of eighth-graders, school-leaving students and adults are unable to read and write very simple texts, such as reading or writing one's own name, and lack 'technical' decoding, word blending and psychomotor skills, functional illiteracy in developed countries with compulsory education is both quantitatively and qualitatively basically a problem of differential 'cognitive' and 'motivational' access to the culture of literacy (Leseman, 1993a).

The second answer complements this argument. Whereas education is probably failing in teaching essential skills, the fact remains that not all students are equally affected by this failure. Some will ultimately become fully literate according to present day standards, and will increasingly be able to acquire new knowledge and skills by using written language. The conclusion is inevitable: these students have at their disposal other resources besides what schools offer. More particularly, their home environments endow them with a kind of 'intellectual capital' and the greater this capital, the greater the educational profits. When looking at the very start in formal education, the question is what this capital looks like in terms of cognitive and language skills that prepare children from privileged homes for literacy, and how these skills and knowledge are socialized.

In their search for early predictors of short and long-term literacy, researchers have identified two clusters of knowledge and skills that are important here. The first concerns 'metalinguistic skills', such as print knowledge, knowledge of the alphabet, phonemic awareness and phonemic segmentation skill (which arises, for example, from saying nursery rhymes; cf. McClean, Bryant & Bradley, 1987; see also Sulzby, 1986). This type of skills especially predicts literacy achievements in the first grades. The second cluster concerns general conceptual knowledge ('world knowledge'), vocabulary and discourse skills, i.e. the ability to understand spoken or written texts that refer to non-immediate worlds (see Snow, 1991, and in this volume: Verhoeven & Van Kuyk, 1991; Leseman, Sijsling & De Vries, 1992). This cluster of skills especially predicts reading and writing achievements in later grades, when reading activities generally have changed character and have become reading comprehension.

This chapter outlines a view on socialization of skills in young children that relate to school achievements and literacy acquisition. Evidence from current research will be presented supporting the socialization model and showing effects of socialization on the development of general conceptual knowledge, vocabulary and discourse skills - knowledge and skills identified as crucial for later literacy. Finally, theory and findings will be related to implications for early intervention programs.

2 Family socialization: access, guidance and instruction

Children are active learners, eager to pick up 'information' if it is relevant or *made* relevant to them by experienced members of the cultural community to which they belong, in particular their parents and other caregivers (cf. Rogoff & Gardner, 1984; Rogoff, 1990). The information children use to construct 'theories' about their environment, and to develop skills and action schemes to act upon it, is either present in the structure of the physical environment (a main theme in piagetian thinking) or *represented* in social arrangements and social interactions (a main theme of vygotskian thinking; cf. Vygotsky, 1978; Wertsch, 1985). Although both present and represented information are equally important for development, socio-cultural differences in development are expected to arise from differences in the socially represented information, i.e. in socialization practices.

Rogoff (1993) distinguishes three modes of socialization. The first, participatory appropriation, refers to the fact that children, even the youngest, are part of communities and participate in the community's social and cultural practices. Differences in social and cultural practices between communities or in selective access allowed to children - depending, for example, on age and sex - are a primary source of socio-cultural differences in development. The second mode of socialization is guided participation. Children are invited to participate in intersubjective relationships and their behavior is regulated, e.g. rewarded or punished, according to the norms and values of the community. Cultural differences in development may be expected to arise when norms and values of communities differ. The third type of socialization Rogoff distinguishes is called the apprenticeship. Apprenticeships are more or less institutionalized and organized forms of socialization with explicit learning and mastery goals and instructional methods, reflecting what the community perceives as important knowledge and skills.

Socialization in the family can also be described in terms of participation, guidance and apprenticeships. Everyday, the young child participates in situations in which parents, older siblings or other adults, are involved in the wide range of practices that make up family life, such as housekeeping, caring and nurturing, shopping, leisure time activities, and so on. From time to time, the child's behavior in these situations will be regulated, rewarded or disciplined, and in this way the child gradually learns about the norms and values of the family and the wider cultural group, initially in an essentially non-reflective and implicit way. Finally, the family offers apprenticeships to children. For example, parents may find it important to teach the child how to eat with fork, knife and spoon. The child is instructed with great patience and is given opportunity to practice until he/she has mastered the skill.

The family socialization model outlined here briefly can be further refined in order to understand socio-cultural differences in development (see also Leseman, 1993b; Leseman, Vergeer, Sijsling, Jap-A-Joe & Sahin, 1992). With respect to participation, it is important to know the degree to which or how often the child is provided access and to which domains of cultural knowledge and skills. For example, one can look for differences between families in the *amount* of stimulating experience or in the number of opportunities they offer young children to get familiar with all kinds of forms and functions of written language, and to learn about written language - either spontaneously, or through guidance and instruction. In families with less well-educated and especially illiterate parents opportunities for children to become acquainted with literacy uses will probably be more limited, although, as Anderson and Stokes (1984) observed, products and technologies of literate culture intrude and are incorporated into everyday routines even in the most culturally-deprived families. On the other hand, in families of more educated middle-class parents - who see themselves as in the 'mainstream of modern literate culture' (cf. Heath, 1983) - children will have ample opportunities to observe their parents reading, not merely local newspapers or magazines, but also literary books and text-books, and they will often hear them discussing books.

In terms of guided participation and apprenticeships, it is also important to know *how* the child's endeavors to learn and to master are guided, and how the child is instructed. One can ask, for example, if the information or instruction given by the parent is adequately tuned to the child's developmental level and learning needs, or to be more precise, to the child's 'zone of proximal development' (Vygotsky, 1978). One can further ask whether the child is social-emotionally supported, so that ultimately he or she will learn to enjoy learning and problem solving, and will learn to persevere even when it becomes difficult. In other words, differences between families can be expected in what is called the social-emotional quality of social interactions and parents' sensitive responsivity (Skinner, 1985; Erickson, Sroufe & Egeland, 1985; Denham, Renwick & Holt, 1991), which depends upon, for instance, the presence of economical stress, unemployment, housing conditions, number of children, and availability of social support (cf. McGillicuddy-DeLisi, 1982). It may also depend upon child-rearing beliefs held by parents and the wider cultural community (Schaefer & Edgerton, 1985; Harkness & Super, 1992). For instance, in some cultural communities young children are believed to be basically inept and immature until aged four or five. Therefore, parents may find it inappropriate to teach valued skills to children below this age or to share responsibility with them. Heath (1983) observed that in both the black and white lower class communities in the southern United States she studied the younger children were not seen as valuable informants. This was reflected in parents' styles of talking with young children, i.e. in the dominant type of 'question-statements' asked and in the lack of meaning-contingent responses to children's statements.

Finally, it is important to know *what* is appropriated or learned in diverse situations, what kind of ideas children construct or pick up, and what kind of skills are developed and exercised. Socio-cultural differences in what can be called the more or less informal 'content' or 'curriculum' of participation, guided participation and apprenticeships, can be expected in several respects, reflecting what parents and their cultural community consider important knowledge and skills. The role of formal education can be mentioned here. Parents who are successfully socialized in formal education and have attained a high level of education, will simply know better and value more the knowledge and skills required in education. This, for example, might explain why in homes of the highly educated, in all sorts of everyday conversations, for example at dinner time, ypung children are more often invited or even pressed to be explicit and accurate in refering to the non-immediate events they are reporting, although these parents, as all parents, would only require a single word to know what the child is trying to say (cf. Wells, 1985).

In summary, one can hypothesize that differences exist between families from different socio-cultural backgrounds in both amount, quality and content of potentially stimulating interactions in the home which explain early differences in cognitive and language abilities. Besides genetic factors, it can be hypothesized that differences in socialization processes have a significant formative effect on the child's cognitive and language abilities. In a longitudinal study conducted by a group of researchers at the Erasmus University, Rotterdam, evidence was found in support of this model of cognitive and language socialization in the family. In the next sections, a brief report will be given of the main findings, based on a section of the data collected. In the final part of the chapter the findings will be related to some of the core issues in early intervention programs.

3 The Rotterdam study

Design

A group of 145 families, consisting of 45 Dutch middle class, 40 Dutch lower class, 28 Surinamese immigrant and 32 Turkish immigrant families, participated in the Rotterdam study on socialization patterns.

A short note on both immigrant groups in the study is in order here. Most Surinamese families living in the Netherlands todays migrated from Surinam, a former Dutch colony in the Caribbean, in the early seventies and eighties. The Surinamese population itself consists of several ethnic communities. Most Surinamese have Dutch nationality, speak Dutch as mother tongue (or, at least, as one of the home languages), and are educated either (partly) in the Netherlands or in Surinam, where the educational system is modeled on the Dutch system. Most Turkish families living in the

Netherlands todays, migrated from poor, underdeveloped regions of Turkey from the late seventies onwards. They came to be reunited with the fathers who were already living in the Netherlands as guest workers. The Turks are known for their strong sense of ethnic identity. Only a few have Dutch nationality. On the average, limited education and functional illiteracy rates ranging from 10 to 40% (in case of older Turkish women; Doets, 1992) have been reported. The Surinamese and Turkish families in the Rotterdam study cover a broad range socio-economically. There are parents with almost no education and parents with an university degree in both groups, but, on the average, the socio-economic status is slightly below (Surinamese group) to far below (Turkish group) the Dutch mean and this reflects quite accurately the actual position of these ethnic groups in the Netherlands.

The study was designed as longitudinal research, with three waves of measurements, separated by six-months intervals. In every round, data were collected by means of interviews, tests and video-recordings in the home environment. During the first round, the average age of the children involved was 3;0 years (range 2;10 to 3;2). During all three data collection rounds, video-recordings were made of six different types of parent-child interactions, covering a broad range of cognitive and language skills. Two of the interaction types studied are particularly relevant to the theme of the present chapter, as they are related to language and pre-literacy development. One interaction concerns a categorization game in which semantic-taxonomic concepts and vocabulary learning are involved. The second interaction concerns joint picture-book reading, involving both metalinguistic knowledge regarding literacy, vocabulary learning and discourse skills. In this chapter results of the video-recordings collected during the first round, when the children were aged three years, will be presented, and data on developmental level at age 3;0 and 3;6.

Parent interview

The parent who is the main caregiver was extensively interviewed. This was almost always the mother, in a few cases the father or the grandmother. For convenience, all interviewed caregivers will be refered to as the mother. In the interview, a number of issues were treated, such as the parents' family background, age, educational level, job level, employment status, reading and writing activities, cultural participation, mother tongue, language used now and present family constellation. In addition, a translated version of the

Parental Modernity Scale (Schaefer & Edgerton, 1985), a questionnaire on parental beliefs on child care and child development, was presented to the mothers. From this questionnaire a scale was derived representing parental modernity. The internal consistency of the scale is satisfactory.

Finally, the mothers were asked to estimate the average frequency during recent months of occasions they had shared talking, reading, playing, shopping or house keeping, in direct interaction with the child or in interaction with others (e.g. the husband), but in the target child's vicinity. A questionnaire was constructed according to the principles of facet-design (Cantor, 1985). It would do insufficient justice to all other situations in which the child may informally learn from his parents if parents were asked only to estimate the amount of time or the frequency of occasions in which they were interacting with their child in situations such as game-playing and reading aloud which are more typical for western middle-class culture than for lower-class or immigrant cultures (cf. Anderson & Stokes, 1984; Rogoff, 1990). A so-called mapping sentence was formulated in which three types of context, two types of interaction and three domains of development were systematically varied and crossed (see Figure 1).

Figure 1: Mapping sentence

How regularly does it happen when you are *{ a) running the household, b) caring, c) spending leisure time}* that you perform a particular kind of activity *{ a) manipulating objects/(practical) problem-solving, b) reading/writing, c) talking}* involving the child *{ a) directly, b) indirectly/passively-observing}*?

Questionnaire items were constructed according to the various combinations of activity type (or developmental domain), context and directness of the interaction represented in the mapping sentence. From the questionnaire, three sub-scales were derived representing activities, across contexts and types of interaction in the oral language, literacy and toy play/practical problem-solving. The sub-scales have satisfactory internal consistency.

Testing children's developmental level

The children were tested using an assessment battery comprising tests of pre-mathematical concepts, knowledge of semantic-taxonomic concepts, and receptive and productive vocabulary development. The children were tested in their dominant language, except when Dutch language proficiency was being measured when only the test instruction was given in the child's home language. The Surinamese children were tested by a Surinamese researcher, and the Turkish children by a Turkish compatriot. The Turkish children also took equivalent parallel tests of Turkish vocabulary and text comprehension. As it became apparent that, with only a few exceptions, most of the Turkish children had no proficiency in Dutch whatsoever, we used the Turkish language test results to compare language development and home effects on language development with the Dutch and Surinam groups.

Video-recordings in the home environment

Video-recordings were made of (among others) mother and child jointly solving a categorization game and jointly reading an unknown picture-book. For the first interaction, the parent was asked to play an educational game with the child. It was presented as a 'learning and thinking' game. In this game, in fact a categorization task, the child had to group pictures of well-known objects by threes which belonged most closely together. For convenience, this task will be called the Three Pictures Task. The task was too difficult for the three year-old children, and the parents were instructed to teach the children how to solve the problem.

The second interaction concerned joint picture-book reading. A picture-book was selected containing both numerous pictures and a substantial amount of text. The book was recently published and none of the families had the book. The parents were instructed to read the book with the child the way they normally dis so or in the way they felt it should be read. Eight parents, all Turkish, indicated they never read a book to the child, in most cases because they were unable to read. They were offered, as an alternative, the possibility of telling a story to the child. Some of these parents 'read' the pictures in the book, which was also a method of picture-book reading used by some of the Dutch middle-class parents. The remaining five Turkish parents told their children stories of their own youth from memory, but they are not included in the statistical analysis to be reported later.

Two core concepts of the present study - *content* and *quality* of parent-child interactions - are measured by observing and coding the video-taped mother-child interactions. The *number* of joint activities of mother and child in domains of language, literacy and play is, as was stated, measured by means of a questionnaire. The Erickson, Sroufe and Egeland (1985) coding system was used to the code the social-emotional and didactic quality of the interactions. This coding system consists of 14 rating scales to evaluate the social-emotional quality of mothers' and children's behavior. Mothers, for example, were evaluated on the secureness, warmth and supportiveness of the interaction climate they provided. Children were evaluated, for example, on the persistence and enthousiasm they showed during the interactions. The intercoder reliability, determined on the basis of 20 cases, was satisfactory.

Coding systems were developed for coding of the instructional content of the interactions. Taking verbal utterances, such as giving a clue, and nonverbal acts, such as pointing to a picture, as basic behavioral units or 'events', coding categories were used which represent a wide array of potentially instructive or informative behaviors in both mother and child. For example, in the Three Pictures Task, which was a categorization problem, utterances were counted which conveyed a search strategy, a rule or a rationale that would lead to a grouping of pictures according to their semantic-taxonomic superordinate. As it was the parent's task to explain the purpose of the Three Pictures Task to the child before starting, the quality of the task instruction was also coded. In coding the Book-Reading interaction, several verbal and nonverbal acts were coded, covering most of the events that usually happened during the joint reading. For example, all events of pointing to a picture in the book were counted, which was one of both mother and child's most frequent acts. The intercoder correlations, determined on 20 recordings, were sufficient for most categories used to code the contents of both interactions.

4 Results

Conceptual knowledge and language skills at age 3;0 and 3;6

Table 1 reports means and standard deviations of the conceptual development and vocabulary tests in the native language for the four groups of children involved in the Rotterdam study. Gaps exist at both measurement times between Dutch middle-class children and Turkish children one to two standard deviations. The Dutch working-class children and the Surinamese children occupy intermediate positions. The present study findings on conceptual and vocabulary development correspond closely to findings in other Dutch studies on larger cohorts of Dutch and immigrant children in the 3-6 age range (Boogaard, Damhuis, De Glopper & Van den Bergh, 1990; Verhoeven & Van Kuyk, 1991; De Jong, Klapwijk & Van der Leij, 1993).

Table 1: **Conceptual development and vocabulary in the child's dominant language at age 3;0 and at age 3;6; means, standarddeviations and one-way analysis of variance**

Social class and ethnic group	Vocabulary means and sd's				Concepts means and sd's			
	age 3;0		age 3;6		age 3;0		age 3;6	
Dutch middel class	33	(12.3)	42	(8.8)	37	(13.9)	48	(10.7)
Dutch working class	27	(10.9)	33	(12.0)	28	(10.1)	32	(10.4)
Surinam ethnic group	26	(8.9)	31	(9.3)	28	(13.0)	34	(10.4)
Turkish ethnic group	23	(9.1)	31	(8.4)	19	(11.4)	28	(15.2)
effect size η^a	.34***		.44***		.48***		.53***	

[a] Resulting from one-way analysis of variance; * $p<.05$, ** $p<.01$, *** $p<.001$

The table further shows that the means of all groups rise with age, but that, as can be infered from the results of the analysis of variance, i.e. from the effect-size coefficient η, the differences between the groups tend to become greater.

Amount, quality and content of educational interactions

In terms of practices and contexts that may promote language and pre-literacy skills, profound differences exist between the four groups of families in the participatory access provided to oral and literate language domains to young children. Differences were relatively small ($F=7.1$, $p=.001$, $\eta=.36$) in opportunities to participate in oral language practices across situations and types of interaction, as determined by a questionnaire. In all families in our study children frequently took part, in or were present at, conversations during mealtimes, housekeeping activities and social meetings with other family members. There were, however, important differences in detail: in Dutch middle-class homes as compared to, for example, Dutch working class homes and Turkish homes, children were reported as having face-to-face conversations with their parents more frequently.

Not unexpectedly, differences between the four groups in amount of stimulating experiences offered, appeared to be largest in literacy-related domains. It was found that several types of literacy products and literacy technologies were present in all homes. For example, even in the homes of functionally illiterate or semi-illiterate parents, there were books, magazines, newspapers and writing materials, and parents reported looking into them and using them sometimes. However, the frequency with which a child would have the opportunity to observe his parents actually reading or writing, or to engaging actively in a book-reading interaction with his parent, differed strongly according to socio-cultural background. In general, access to literacy practices differed strongly between the four groups of families (F=24.2, p=.0001, η=.59).

On the *how* of socialization, we also found profound differences in intersubjective interaction styles of parental support, regulation and discipline of the child's behavior. Less well-educated parents and parents from the ethnic minorities were observed to use physical discipline and scolding more often, to show less repect for the child's autonomy, and to provide less emotional support and positive feedback. The ratings on the parent-scales of Erickson et al. (1985) differed strongly between families of different social and ethno-cultural backgrounds, especially in the relatively difficult and stressful Three Pictures Task (F=17.6, p=.0001, η=.55). As a consequence, according to socio-cultural background children in these homes showed less persistence, self-regulation and enthusiasm (F=6.4, p=.001, η=.37).

Finally, differences were also observed between families in *what* parents were, intentionally or unintentionally, teaching children in literacy related interactions, the Three Pictures Task and the Book-Reading interaction. For example, in the Three Pictures Task, a categorization task, we found that the less favorable the environmental background, the less the children used, either spontaneously or as a reaction to his mother's requests, semantic-taxonomic or 'paradigmatic' rules and strategies to justify or search for a solution. Instead, they tended to rely on thematic-contingency or 'syntagmatic' relations, and even irrelevant principles to categorize objects. Furthermore, it was found that overall, these children contributed less to the interaction, regardless of content or level. The mother's contribution to the problem-solving could be similarly interpreted. The less favorable the background, the lower the level of information contributed to the problemsolving, and the more instructions were based on irrelevant and thematic, instead of semantic relations. Moreover, and particularly, the quality of the task instruction at the beginning of the session was proportionally low in terms of the degree to which in her instruction to the child the mother mentioned essential features of the task, especially whether the child was adequately oriented to its conceptual structure.

In the book-reading interactions, we observed that children from underprivileged socio-cultural backgrounds displayed more verbal and nonverbal acts that were closely related to the immediate interaction context, such as pointing to pictures, naming single items and describing pictures. These acts and utterances can be considered as 'contextualized' in nature and are probably not very helpful in preparing young children for later literacy. Children from middle-class homes, on the other hand, often talked about the book and about features of printed language, fostering metalinguistic insight in written and printed language. They often gave or asked for explanations and, in particular, engaged with the parent in story-extending talk. In short, their contribution was marked by a decontextualized use of language. The parents showed a more or less similar behavioral pattern. Parents from advantaged socio-cultural backgrounds began decontextualized talk more often, such as print-related talk, story extension and topical extension, conveying general world knowledge.

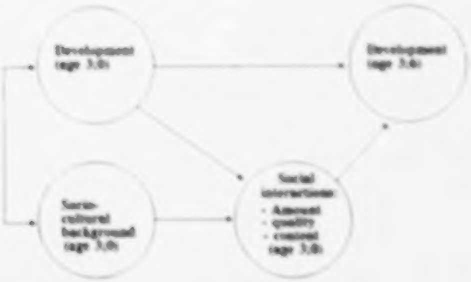
Using multiple regression analysis for mother and child separately, indices were constructed representing socio-cultural differences in 'content' or 'informativity' of both interactions in an optimal way (see also Leseman et al., 1992). The computed indices for mother and child differed significantly between the groups (for the categorization game $F=18.2$, $p=.0001$, $\eta=.56$ and $F=5.0$, $p=.01$, $\eta=.33$ for mother and child respectively, and for the book-reading interaction $F=23.8$, $p=.0001$, $\eta=.60$, and $F=8.0$, $p=.001$, $\eta=.40$).

A longitudinal causal model of the home environment

Children from different socio-cultural backgrounds differ rather strongly in basic cognitive and language skills as early as age three. Paralleling these differences, families from different social and ethno-cultural backgrounds appeared to differ in the three basic dimensions of the family system of informal pre-school education: amount, quality and content, as well. Two additional questions have to be answered here. The first is whether these differences on several socialization planes are relevant to a child's cognitive and linguistic development, especially in domains relating to literacy acquisition; conceptual development and vocabulary growth in the present research. A second, related, question is whether all three facets of the socializing environment are equally important for development and for explaining socio-cultural differences in development in this particular group of families. To provide a tentative answer, we used covariance structure analysis technique to model the children's home environment in relation to the developmental process, and to test the hypothesized causal effects of the social environment on development, as mediated by the three distinguished dimensions of social interactions.

Figure 2 shows the basic model, which is simplified for presentational purposes. It is a so-called path diagram, specifying cause-effect relationships between variables. The left part, comprises two circles with one representing the background factors, socio-economic status, parental beliefs, family size, and ethnic group membership.

Figure 2: Basic longitudinal causal model of the family as a learning environment



They are considered 'exogeneous factors at mesolevel' to the social interaction system on 'microlevel', much in accordance with Bronfenbrenner's (e.g. 1989) ideas. The second circle represents the child's level of conceptual knowledge and vocabulary size at the first measurement point - age three. The double pointed arrow between the background factors and developmental level at the first measurement time reflects the fact that both factors are (highly) intercorrelated, pointing to the sum effects of genetic influences and socialization processes before age three.

Development as a process of becoming more competent, can be modeled by an *autoregressive path structure*. The single pointed arrows between the circles symbolizing the children's developmental level at ages 3;0 and 3;6 form an autoregressive structure that represents development as a process. Developmental level at the first measurement time is taken as a 'cause' of the developmental level at the second measurement time. Note that exactly the same measurement instruments were used both times. This approach is consistent with the recommendations of Gollob and Reichardt (1987). In order to assess effects of environmental factors on development as a process, autoregression should be taken into account by modeling developmental level at an earlier time as covariable, i.e. as a kind of pretest. Finally, the Figure shows the hypothesized effects of intermediary socialization processes on the area of (pre)literacy - laid out in the three basic dimensions amount, quality and content - on the developmental process. It is assumed that the socialization processes observed at the first measurement time are proximal causes of the observed developmental process from first to second measurement time.

It is further assumed that these processes are influenced by socio-cultural background characteristics and by the child's developmental level at the first measurement time, i.e. some of the differences observed in mother and child interactional patterns are assumed to result from pre-existing differences in children's abilities. The model was tested by means of the LISREL-6 software (Jöreskog & Sörbom, 1986).

Table 2: **Results of LISREL analysis; standarized causal effects and explained variance R^2; χ = 7.5, DF = 3, p = .05, RMSR = .02**

Exogeneous background factors and development covariates	Intermediating Process			Dependent cognitive and language variables	
	Amount	Quality	Content	Vocabulary	Concepts
Socioeconomic status	.26	.23	.29	--	--
Modernity of parental beliefs	.19	.10	-.10	--	--
Surinam ethnic group	-.10	(-.03)	-.20	--	--
Turkish ethnic group	-.17	-.17	-.32	--	--
Vocabulary				.50	.20
Concepts				.20	.53
Intermediating process variables					
Amount of oral and literate language experience				(.04)	(.07)
Social emotional quality of parent-child interactions				.12	.13
Cognitive and linguistic content of parent-child interactions				.30	.23
R^2	.35	.33	.47	.63	.68

The results, listed in Table 2, show that an acceptable 'goodness of fit' of model and data was found. Therefore, the model can be considered an adequate statistical representation of the observed reality. The causal direction is from left to right in Table 2. A number of conclusions can be drawn from the estimated path coefficients, which are standardized regression weights indicating size and statistical significance of the causal effects. First, socialization process indicators, measured at age 3;0, add significantly to the explained variance in developmental level at age 3;6.

This supports the hypothesis that home socialization processes affect development. Particularly, content characteristics of social interactions appear to have formative effects on development. Social-emotional quality seems to be less important for development of cognitive and linguistic skills in strictu sensu - the dependent variables in the present research. If *social-emotional development* had been the focus of the research, stronger impact would probably have been found (cf. Denham et al., 1991; Erickson et al., 1985). Although clearly distinguishing between the four socio-cultural groups, mere amount of stimulating experience or numbers of opportunities of participatory access to oral and literate language use practices across diverse situations in the home context does not have much effect on development. While it is safe to assume that at least a certain minimum amount of access to, for example, domains of oral and literate language use, must be provided, social-emotional quality and, in particular, cognitive and linguistic content are apparently the real determining factors. Finally, the results suggest that effects of background factors at mesolevel on development, are entirely mediated by process characteristics of the family system at microlevel.

5 Conclusion

It was found that, even when pre-existing differences in developmental level are strictly controlled by incorporating them as covariables in the statistical analysis model, socialization patterns in the family certainly affected the developmental process of the children. In fact, in a period of about six months, we found an additional amount - about 16% in all - of explained variance in conceptual development and mother-tongue vocabulary. Effects of background factors on development appeared to be entirely mediated by the socialization process characteristics. The finding pertaining to the second question posed in the previous section was interesting. The mere degree of participation in oral and literate language use situations in the home was less important, whereas differences in cognitive and language contents of the observed interactions, that is in the *what* of informal learning in the home, explained most of variance in developmental measures. To summarize, by using the outlined theory on family socialization as theoretical framework it is possible to adequately describe, measure and statistically model socio-culturally diverse families as learning environments for young children and to explain early differences in the cognitive and language skills which are so important for later literacy acquisition and school success.

A number of implications for early intervention in socioculturaly different groups can be derived. Firstly, socialization practices in families have probably substantial formative effects on childrens' development. Although many may have been convinced of this in advance, recent statements by leading social scientists indicate that the classical debate on the malleability of intelligence of disadvantaged children is still alive and well, requiring intervention programs to legitimize their efforts (Scarr, 1992; Jensen, 1991). Differences in development in the domains of knowledge and skills relating to later literacy acquisition and school success in general, between children from diverse social and ethno-cultural communities can explained to a great extent by differential socialization. One can conclude that there remains a margin for effective intervention aiming at promoting literacy and school success for all.

Secondly, families, day-care centers and preschools are important learning environments for young children due to the participation opportunities, guidance and apprenticeships they offer. In the Netherlands, as in many other countries and particularly developing countries, young children from disadavantaged families spend most of their time at home before going to kindergarten or primary school. Therefore, the family seems to be the most logical site for early intervention. However, to date experiences with home-based intervention programs untill - the absence of long-term effects in many endeavors - warrants caution. Apparently not all home-based intervention and family empowering approaches have succeeded in mobilizing the potential of the family. The present research findings offer a number of possible explanations.

One possible explanation is that unsuccessful home-based interventions did not succeed in massively enhancing the amount of potentially instructive experience children have in relevant domains, such as oral and literate language use. This is one of the explanations given by Eldering and Vedder (1992; see also Eldering & Vedder, this volume) for the absence of even short-term effects of the HIPPY-program in the Netherlands. The HIPPY-program was not fully implemented; only about 40 of the 60 prescribed weekly tasks were actually carried out. As a corollary, enhancing the implementation level might help. Following the present research results, it can be expected that merely intensifying a program so that more time is spent to program activities, without explicitly changing content and quality of the way these and similar activities are carried out in the family, also outside the context and scheduled time of a program, may not suffice.

Another explanation is that home-based programs did not succeed in altering the social-emotional quality of parent-child interactions and the didactic style of parents, which may have made them less effective teachers. There may even have been a negative influence on the emotional bonds in the family. Cognitively focused, structured intervention programs require parents to interact with their children in all kinds of problem solving activities, some of them similar to school tasks. The more difficult, unfamiliar and stress evoking the program activities, the more the social-emotional quality of the parent-child relationship will be jeopardized. In the Rotterdam study, for example, it was found that during difficult problem-solving activities, differences in social-emotional quality and didactic style between families from diverse socio-cultural backgrounds were strongest (Leseman et al., 1992). An additional comment is that it appears from more detailed analyses of the Rotterdam study that parental beliefs on child-rearing and child-development, along with socio-economic stress and family constellation characteristics, are among the strongest explanatory background characteristics for differences in social-emotional interaction style and perceptions of the didactic role (Vergeer, Leseman, Sijsling, Jap-A-Joe & Sahin, 1992). An additional reason for the failure of some home-based programs, is probably the neglect of the importance of parent education and parent support. Parents should be given insight into young children's development and learning in order to make them more sensitive perceivers of children's motives and needs. Kağıtçıbaşı's report on the success of the Turkish Early Enrichment Program which, she states, results to an important degree from the mother-empowerment component in the program, is in accordance with this interpretation (Kağıtçıbaşı, this volume).

Finally, in home-based interventions, however prestructured and 'parent-proof', one should be aware of the fact that parents nevertheless bring their own perceptions to the task of what is important to teach or to accomplish. If, for example, reading books to children is brought into the home as a program activity without further explanation, modeling and structuring of the desired interaction formats, parents may adopt a 'model' of how to read with the child that is derived from literacy experiences in their own socio-cultural niche, often experiences related to religious practices. As was observed in the Rotterdam study, there were parents who read books sentence by sentence, asking the child after every sentence to recite it as precisely as possible (Jap-A-Joe & Leseman, 1993). In many other families, books were read in a typically recreational, diversional way, without elaborating on the story, asking for explanations and extending talk; it is the typical format of book-reading interactions at bed-time. Indeed, this sometimes led to the child almost falling asleep. In general, prevailing models of book-reading, talking and problem-solving in the parents' socio-cultural niche will influence the way they interact with their children as part of a program's requirements. In fact, the socio-cultural niche offers models that embody valued skills and knowledge of the community to which the parents belong, but which may not be compatible with the program's objectives.

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LITERACY DEVELOPMENT IN A MULTILINGUAL CONTEXT

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1 Introduction

During the past decades literacy has gradually become a major concern all over the world. Though there is great diversity in both the distribution and degree of literacy in different countries, there has been an increasing general awareness of the number of illiterates and the consequences of being illiterate for personal life. However, literacy is no longer seen as a universal trait. Focussing on culturally-sensitive accounts of reading and writing to social practices the concept of literacy as a single trait does not seem very feasible. A multiplicity of literacy practices can be distinguished which are related to specific cultural contexts and associated with relations of power and ideology. As such, literacy can be seen as a lifelong context-bound set of practices in which an individual's needs vary with time and place.

With respect to modeling the competence of literacy, the particular sociolinguistic position of ethnic minorities should be recognized (cf. Fishman, 1980; Hornberger, 1989; Verhoeven, 1987a,b; Verhoeven, 1993). Ethnic minority groups are often confronted with the task of communicating in the dominant language of a majority environment in order to cope with daily life. Usually, this language is learnt as a second language (L2). From a linguistic point of view ethnic minority people are often conceived of as 'second language learners'. However, this conception is problematic for at least two reasons (cf. Extra & Verhoeven, 1993a,b). First of all, not all members of ethnic minority groups acquire the dominant language of the majority environment successfully. In fact, L2 acquisition may come to a halt at a stage that is far removed from near-native competence. Secondly, the first language is taken into account as a potential source of (un)successful transfer in L2 acquisition, rather than a language variety in its own right. Language varieties of the countries of origin, being learnt in the process of primary socialization, can be used as a vital instrument for in-group communication. These language varieties may therefore have an important value as symbols of ethnic identity.

In the present paper the appropriateness and effectiveness of literacy programs for ethnic minority children will be dealt with. First of all, the acquisition of literacy in a multilingual context is examined. In addition, cognitive and socio-cultural issues related to literacy and linguistic diversity are discussed. Arguments for bilingual literacy instruction will also be presented. Finally, a perspective on literacy education for ethnic minority children is given. Throughout the whole paper references will be made to the research outcomes of current and recently completed studies on ethnic minorities in the Netherlands.

2 Development of language and literacy in a multilingual society

It is a common pattern that ethnic minority groups live in a country where another language is dominant and where native speakers of this dominant language do not speak or understand the minority language varieties. Intergroup communication is most likely to take place in the majority language. However, the language norms for intergroup communication do not need to be adopted for intra-group communication. Given the fact that language can have a core value of cultural identity the ethnic group language is often used for communication in the own ethnic community. Group membership turns out to be an important explanatory factor in the language behavior of ethnic minorities.

Early language and literacy learning

For many ethnic minority children first language (L1) starts from a favorable position. Its development benefits from rich input from the family and the neighborhood, but later the conditions of exposure to L1 may become very poor. At school the mother tongue is often banned; at best it constitutes only a minimal portion of the curriculum. Depending on the channels of language input in the home environment, a large variation in first and second language acquisition patterns among ethnic groups can be expected. In a recent study (Narain & Verhoeven, 1993; Verhoeven, Extra, Konak, Narain & Zerrouk, 1993) we examined the patterns of first and second language development of 91 Turkish, 111 Moroccan and 104 Antillean children living in the Netherlands. In a longitudinal design language data were collected at three moments of measurement: at the beginning of kindergarten, and after one and two years of instruction in school. Departing from a hierarchical structure of language proficiency distinct tasks were administered, measuring equivalent phonological, lexical, syntactic and textual abilities in L1 and L2: sound manipulation, cognitive categorization, receptive and productive vocabulary, sentence imitation and text comprehension. It was found that the Turkish children were quite dominant in their mother tongue at all three moments of measurement. To a lesser degree the same was true for the Moroccan group. The language proficiency levels of the Antillean children tended to be more balanced. The difference in first and second proficiency levels in the three groups could be explained from the language input in the family and the wider community, on the one hand, and from the cultural orientation of the children and their parents, on the other hand.

Multicultural studies of early literacy show that in spite of differences in cultural background and language diversity, children are able to learn the essentials of literacy at a very early age. Studies from Hanson (1980), Mino Garces (1981), Kupinsky (1983) and Moore (1990) showed that bilingual children in collaboration with teachers or peers who speak and write are able to acquire literacy skills spontaneously. However, it turns out that there are large differences in the knowledge of, and the desire for literacy among ethnic minority children entering school. This can be explained from a large variation in literacy support in the home environment. Wells (1985) and Snow and Ninio (1986) have shown that success in early literacy acquisition is related both to the values attached to literacy in the home and to the steps that parents take to explain this value to their children. It is clear that the role of parents in helping their children to (re)discover the principles of literacy is crucial.

In many cases there is a mismatch between the linguistic abilities ethnic minority children bring to the classroom and the language and literacy curriculum at school. Ethnic minority children who receive literacy instruction in an L2 will usually be faced with a dual task: besides the characteristics of written language, they will have to learn an unfamiliar language. Downing (1984) has claimed that the essential features of writing system will be more readily developed, when literacy instruction is based on familiar exemplars from the mother tongue than on less familiar exempiars from a second language. He suggested that the cognitively confusing effects of teaching literacy in a second language will concern both structural and functional aspects. In a recent study (Verhoeven & Van Kuyk, 1991) the acquisitional pattern of conceptual and metalinguistic knowledge in Dutch as a first and second language was compared. A battery of thirteen tasks, measuring receptive and productive vocabulary, definition skills, narrative skills, literacy concepts, literacy conventions, rhyme, word conservation, sentence segmentation, phoneme segmentation, word blending (syllables versus phonemes) and knowledge of graphemes, was administered with 298 4-year-old children. The informants were divided into three groups: high SES and low SES Dutch children, and ethnic minority children. The results showed that there is a small effect for SES and a much larger effect for ethnicity. However, for the tests that require graphonological knowledge only minor differences were found, due to ceiling effects. Factor analyses were conducted on the the test scores for the Dutch children and the minority children apart. For the Dutch children, factor analysis gave evidence for two factors: conceptual knowledge and metalinguistic knowledge. For the minority children, three factors could be evidenced: besides conceptual knowledge and metalinguistic knowledge there was a third factor referring to word synthesis skills. From this study it can be concluded that the acquisition of conceptual and metalinguistic skills not only proceeds slower in a second language; there is also evidence that in a second language curriculum the ability of word blending has to be learned as a separate skill.

Language, literacy and schooling

Hornberger (1989) proposed a framework for understanding biliteracy development in the individual by defining three continua: oral language-written language, reception-production and L1-L2 transfer. To a large extent the way of progress along these continua is dependent on the instructional alternatives offered to the learner. Different models of literacy instruction in a bilingual context may result in different skills on the part of the learner (cf. Hornberger, 1990). The effectiveness of several instructional alternatives has been discussed in many studies. It can be assumed that children who receive literacy instruction in a second language are faced with a dual task: besides the characteristics of written language, they will have to learn an unfamiliar language, partly referring to an unfamiliar cultural background (Downing, 1984).

Bilingual learners bring with them a quite specific information processing system containing two subsystems that are somehow geared to each other, aimed at the comprehension and production of oral and written information in L1 and L2, respectively. Departing from this bilingual language user system, the question is in what ways the process of learning to read in a second language may be different from the process of learning to read in a native language. Three possibilities arise: by restricted background knowledge, by interference from L1 and by limited proficiency in L2. However, at the onset of literacy acquisition the influence of restricted background knowledge can be considered weak, because in the initial reading curriculum simple narratives are highly emphasized. Two possibilities remain. The question of interference has traditionally been investigated by conducting a contrastive analysis. Similarities and differences between two or more languages were taken as a starting point for the interpretation of second language learning problems. However, the debate on the role of interference in second language reading turned out to be far from conclusive (Shuy, 1979; Hall & Guthrie, 1982).

A newer way of looking at L2 learning problems is to refer to substantial similarities between the strategies employed in first language learning and those in second language learning. Such a design was used in a longitudinal study in which the processes of literacy learning of Turkish children in L2 Dutch were documented and compared with those of Dutch children in their mother tongue during the first two grades of primary school (see Verhoeven, 1987a, 1990a,b). The results of this study show that second language learners are less efficient in various subprocesses of reading and writing than their monolingual peers. Differences in efficiency were found both at the lexical level and at the discourse level of literacy tasks. It can be tentatively argued that owing to limited proficiency in the target language, second language learners have dificulty both in processes of lexical access and in using context. With respect to lexical access, it is interesting to note that the nature of such difficulties changed at different stages of development. At first, L2 learners had problems in recoding graphemic strings, next in using orthographic constraints, and finally in attaining direct recognition.

In addition to the finding that second language learners are less efficient in various subprocesses of reading Dutch, Verhoeven found that in the acquisition of both lexical abilities and discourse abilities first and second learners relied on highly comparable strategies. At the lexical level it was concluded that the strategies first and second learners use in decoding and encoding isolated words turn out to be based on the graphonological structure of the target language. Universal characteristics were also evidenced with regard to the children's processing of discourse. An analysis of oral reading revealed no evidence of interlingual patterns. Moreover, it was found that semantic complexity does show comparable developmental features in first and second language learners with regard to the understanding of coherence, anaphoric and inferential devices in text.

An important practical implication of Verhoeven's research is that the acquisition of literacy in a second language requires a certain level of oral proficiency in that language. Children with limited L2 oral proficiency should be given the opportunity to build up elementary literacy skills in their mother tongue first, or they should be given the opportunity to strengthen L2 oral skills before formal literacy instruction.

With respect to children's cognitive and social development, it can be argued that the acquisition of literacy will be facilitated if the instruction links up with his or her linguistic background. From a cognitive point of view, the transition from oral to written language can be seen as a critical event in the development of children. As Olson (1980, 1991) has pointed out, in written communication logical and ideational functions are primary, whereas oral communication has more informal characteristics. In oral communication the listener has access to a wide range of contextual cues which may clarify the intentions of the speaker, while in written communication such cues are almost completely absent. In a subsequent study Verhoeven (1991a) found that a transitional L1/L2 approach of literacy instruction may have beneficial effects. In two small-scale experiments it was found that a strong emphasis on instruction in L1 leads to better literacy results in L1 with no retardation of literacy results in L2. On the contrary, there was a tendency of L2 literacy results in the transitional classes being better than in the regular submersion classes. Moreover, it was found that the transitional approach tended to develop a more positive orientation toward literacy in both L1 and L2.

An interesting question is what level of first language proficiency will be attained by ethnic minority children in an L2 submersion environment. Owing to a restriction of language models in the community and lack of support for the mother tongue through educational institutions, a stagnation in L1 development can be expected. In a recent study we discovered that such does not necessarily need to occur (Aarts, De Ruijter & Verhoeven, 1993). In this study we collected oral and written language data of Turkish and Moroccan children by the end of primary school. The L1 proficiency of 263 Turkish and 222 Moroccan children in the Netherlands was compared with that of a reference group of 276 Turkish and 242 Moroccan peers in Turkey and Morocco respectively. The overall results showed that the Turkish children in the Netherlands attain native-like performance in their mother tongue. On most of the oral and written tasks a remarkable correspondence between the groups in the Netherlands and Turkey was discovered. The high level of proficiency was not only found for typical school tasks; for functional literacy the children in the Netherlands showed a high proficiency level as well. The Moroccan children in the Netherlands showed more variation on the language proficiency tasks. They obtained reasonable scores on the oral language tasks. However, on written language tasks their proficiency level lagged far behind their peers in Morocco. This result is indicative of the great distance between home language use and standard language conventions in the country of origin.

3 Cognitive considerations

Interdependencies in bilingual development

With respect to the individual variation in literacy success and literacy motivation in bilingual instruction models, the notion of interdependency is highly important. With respect to the acquisition of cognitive/academic language skills such as reading and writing, Cummins (1983) has brought forward the interdependency hypothesis which states that:

"To the extent that instruction in a certain language is effective in promoting proficiency in that language, transfer of this proficiency to another language will occur, provided there is adequate exposure to that other language (either in the school or environment) and adequate motivation to learn that language."

The hypothesis not only predicts transfer from L1 to L2, but also from L2 to L1, unless the exposure and motivation conditions are negative. In a bilingual program, the interdependency hypothesis would predict that reading instruction in one language not only leads to literacy skills in that language, but also to a deeper conceptual and linguistic proficiency which is strongly related to literacy and general academic skill in the other language. In other words, although surface aspects of linguistic proficiency, such as orthographic skills, fluency, et cetera develop separately, an underlying proficiency is presupposed which is common across languages. This common underlying proficiency is thought to facilitate the transfer of cognitive/academic such as literacy-related skills across languages.

Cummins (1984) attempted to conceptualize language proficiency in such a way that the developmental interrelationships between academic achievement and language proficiency in both L1 and L2 can be more fully understood. He integrated his earlier distinction between basic interpersonal and cognitive/academic language skills in a new theoretical framework by conceptualizing language proficiency along two continuums; a horizontal and a vertical continuum. The horizontal continuum relates to the range of contextual support for expressing or receiving meaning. The extremes of this continuum are described as 'context-embedded' versus 'context-reduced'. In context-embedded communication, meaning has to be actively negotiated by participants who give each other feedback and supply paralinguistic cues in case meaning is not fully understood. In context-reduced communication, learners are entirely dependent on linguistic cues for meaning and to suspend knowledge-of-the-world in some cases in order to inderpret the logic of the communication.

The vertical continuum in Cummins' framework is intended to address the developmental aspects of language proficiency in terms of the degree of active cognitive involvement for approppriate performance on a task. Cognitive involvement is conceptualized in terms of the amount of information which must be processed simultaneously or in close succession by the individual. As such, the upper part of the vertical continuum refers to tasks in which language processes become largely automatized, while at the lower end active cognitive involvement is required.

According to Cummins (1984), the above framework permits the developmental interrelationships between proficiency in L1 and L2 to be conceptualized. First, he proposed that such interrelationships can predominantly take place in the case of performance on academic tasks. A task is defined as more academic as the context-reduction and the cognitive demands increase. Cummins suggested that the transferability across languages of many of the proficiencies involved in reading and writing is obvious because they highly incorporate context-reduction and cognitive demands. In a review of studies on bilingual development, Cummins (1989, 1991) concluded that research evidence shows consistent support for the principle of linguistic interdependency in a variety of linguistic domains, including literacy.

Further evidence comes from the beforementioned study by Narain and Verhoeven (1993). In this study the role of interdependency in bilingual development of Turkish, Moroccan and Antillean children was explored. Lineair structural analysis on factor scores of L1 and L2 tasks gave evidence for substantial transfer taking place from one language to the other. For each ethnic group there is substantial transfer from L1 to L2 at the beginning of kindergarten. However, for the Antillean children the direction of transfer tends to turn around after two years of schooling. During this period the children's language proficiency went from dominance in Papiamentu to dominance in Dutch. The latter result can be explained from the assumption that transfer usually goes from the dominant language to the weaker language.

Verhoeven (1991a,b) found also empirical evidence for the interdependency hypothesis in a study on biliteracy development of Turkish children in the Netherlands. Word decoding skills and reading comprehension skills being developed in one language turned out to predict corresponding skills in another language acquired later in time. Interdependency of word decoding could be explained from the cognitively demanding nature of metalinguistic skills required. For reading comprehension, the decontextualized nature of text handling seemed the best explanation.

Bilingualism and school success

With respect to cognition, it is also important to evaluate the consequences of biliteracy education. In several studies it was shown that children who learn to read and write in two languages at an early stage have an advantage in a number of cognitive domains (for an overview see Bialystok & Ryan, 1985; Hakuta, 1986; Cummins, 1989). One particular domain is metalinguistic awareness, the conscious understanding and manipulation of the units of language. The awareness of linguistic form and content is crucial for grasping the written code.

In Narain and Verhoeven's study (1993) we also explored the effect of bilingual development on Turkish, Moroccan and Antillean children's metalinguistic awareness. For each ethnic group the children were according to their L1/L2 proficiency divided into three subgroups: children with above average scores in both languages, children with above average scores in either L1 or L2, and children with below average scores in two languages. In addition, the mean scores of children in the three subgroups on the following metalinguistic tasks were compared: sentence analysis, phonemic segmentation, word blending, rhyme and word conservation. For each ethnic group it was found that the children with a balanced level of bilingual proficiency tended to obtain the highest scores on the metalinguistic tasks. Within the Turkish group the differences in scores were significant for all the tasks under consideration, within the Moroccan group for sentence analysis, phonemic segmentation, rhyme and word objectivation, and within the Antillean group for all tasks, except sentence analysis. This part of the study seems to support the hypothesis that a more or less balanced level of bilingual proficiency enhances children's metalinguistic awareness.

In the study by Aarts, De Ruijter and Verhoeven (1993) we found that the first language proficiency of Turkish and Moroccan children by the end of primary school was positively related with their success of participation in secondary school. There were positive correlations between factor scores of oral and written L1 proficiency and level of schooling after one and two years of secondary school. Moreover, multiple regression analyses were carried out with the children's success in secondary school as dependent variable and their level in L1 proficiency, L2 profiency and mathematics at the end of primary school as independent variables. It was found that along with the L2 proficiency and mathematics scores, the written L1 proficiency predicted the school success of Turkish and Moroccan children.

4 Socio-cultural considerations

Literacy needs

From a socio-cultural point of view, minority group members may feel the need to use two written codes serving two complementary sets of purposes. The primary function of the use of the majority language will be inter-group communication in the community as a whole; functions of the use of the minority language will be intra-group communication and expressing one's ethnicity (Fishman, 1980). The motivation to learn seems to increase as societal institutions pay more attention to the native language and culture of the bilingual child (see Verhoeven, 1991b). With respect to the acquisition of literacy, there is clear evidence that the motivation of children to learn to read increases, as they become more familiar with the language and as they find themselves more competent to accomplish school tasks in that language (see Gillmore & Glatthorn, 1980; Trueba, Guthrie & Au, 1981).

In a multilingual society different ethnic groups may use various written codes, because these codes have at least partially distinct sets of functions. For instance, among Turkish immigrants in Western Europe four written codes are used. The dominant language (i.e. German, Dutch) is used for interethnic communication in the society where they have settled. Turkish is used for intragroup communication with persons in the immigrant and home country and for the expression of one's ethnicity. Arabic provides for a religious identification by making possible the reading of religious texts, such as the Qu'ran. Finally, English increases the chances of higher education and forms the basis of wider international communication.

The written code with the highest status in society will mostly be used in the vital societal institutions, such as education, the labor market, law and justice. In a democratic society this will usually be the majority language, because in geographic and social respect this language possesses the largest communicative potential. Inter-ethnic communication by means of written documents proceeds best in that language. The communicative potential of a minority language will usually be much smaller.

The extent to which members of an ethnic minority group will have a need to use their own language in written communication seems above all dependent on two factors: the written tradition of the ethnic language and the background situation of the ethnic group. With respect to the written tradition of the ethnic language, the extent to which the language has been codified in the past has proved to be a very important determinant. Rules for codification, e.g. orthographic rules, provide a firm basis for uniform written language use. Besides, the literacy tradition of a language is important in enhancing the prestige of the language in question.

With regard to the background situation of minority groups, several factors seem to underlie the use of the written code of the native language. Group size is important insofar as smaller groups are in danger of language loss. The social group structure is also relevant, because of the fact that written text in the native language can be used in institutions, such as religion, education and media. Moreover, the written code of the ethnic language can be used for dealing with contacts with foreign officials, e.g. consulates.

Apart from these sociological factors, the use of the written ethnic language can be motivated by personal needs. There can be a need to communicate with relatives and other people in the country of origin. There can also be a need to learn about one's own ethnicity, or to express oneself in the ethnic language. As such, written language can be seen as a symbol of ethnic identity. As has been shown by Ferguson (1978) members of an ethnic group are able to strengthen their group identification and their social integration by means of written communication in the ethnic language. A large extent and high level of literacy in the country of origin will normally preserve a relatively high level of first language literacy in the immigrant community. Fishman (1988), in her study among the Amish community in the United States, showed how positive learners' experiences and values promoted the use of Amish literacy. In another study among the Navajo Indians in the United States it was shown that Navajo literacy practices in local school settings were transformed to enhance community and cultural identity (McLaughlin, 1989).

If members of an ethnic minority group feel the need to become biliterate, the written use of both languages will usually serve two complementary sets of purposes. The primary function of the use of the majority language will be the intergroup interaction in society. The most important functions of the use of the minority language will be intragroup communication and deepening of one's own ethnic roots.

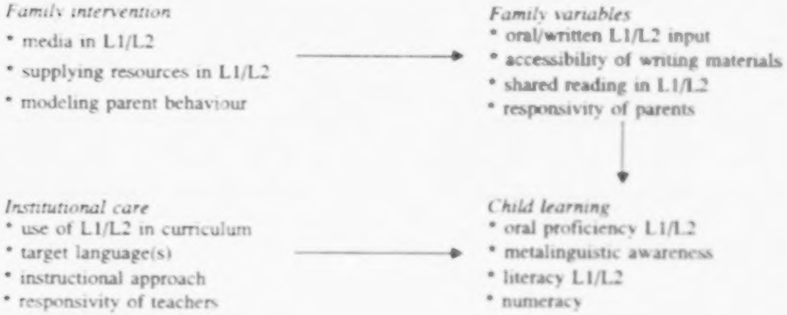
From a social-psychological point of view, it is clear that the motivation of children to read and write increases as they become more familiar with the language and as they find themselves more competent to accomplish the educational task. Moreover, the motivation to learn in L2 will increase as the school and other societal institutions tend to pay more attention to the language and cultural background of the learner. According to Spolsky (1977), the major attitudinal argument in favor of bilingual education is that it enhances the pupils' self-respect to discover that their home language, in which they have invested so many years, is respected by the school system. Empirical evidence for a positive influence of the acceptance of the native language and culture of bilingual children on their self-concept is also demonstrated in the meta-analysis of studies conducted by Willig (1985).

Institutional support

Besides attitudinal support, institutional support can be seen as an important determinant of community language maintenance. Institutional support manifests itself in two domains: family intervention and formal education. In Figure 1 a theoretical framework for the institutional support of minority children's language and literacy learning is given. It can be seen that family intervention may influence family variables which on their turn influence children's learning. At the same time, institutional care may directly influence children's learning.

Research has shown the crucial influence of the home and family on the language and literacy development of children. Fantini (1985) showed that various channels of language input in the home environment, such as communication between and with family members and communication with people outside the family may influence minority children's language development. According to Tosi (1979, 1984) lack of reinforcement of accepted language norms and exclusion from exposure to the standard language can be responsible for weakening L1 development.

Figure 1: **The role of family intervention and institutional care in ethnic minority children's language and literacy learning**


Family intervention
* media in L1/L2
* supplying resources in L1/L2
* modeling parent behaviour
Family variables
* oral/written L1/L2 input
* accessibility of writing materials
* shared reading in L1/L2
* responsivity of parents
Institutional care
* use of L1/L2 in curriculum
* target language(s)
* instructional approach
* responsivity of teachers
Child learning
* oral proficiency L1/L2
* metalinguistic awareness
* literacy L1/L2
* numeracy

With respect to early literacy acquisition of children four home factors turn out to be crucial (Teale, 1980; Sulzby & Teale, 1991): the range of printed materials in the home (i.e. written language input), the accessibility of writing materials, the frequency of shared reading and the responsivity of parents. With respect to the latter variable, Wells (1985) has demonstrated that the rate of language and literacy development in children is associated with specific characteristics of adult speech. He found that the manner and extent to which adults adjust their speech to the immaturity of their conversational partners affects the ease with which children master the language system(s) under consideration. In functional interaction terms he proposed four broad types of intention to be extremenly relevant: (a) maintenance of intersubjectivity, (b) expression of understandable propositions, (c) ensurance of successful communication, and (d) stimulation of further interactions.

As to family intervention the media may play a significant role. Television programmes (e.g. Sesame Street), periodicals and public libraries can be seen as possible mediators of the oral and written language input in the family. Furthermore, specific programs can be initiated to help parents collecting resources in L1/L2, such as good quality children's books and instruments for drawing and writing. In the same programs the parents' responsivity can be trained. 'Scaffolding' is seen as a crucial concept associated with parental assistence in children's language and literacy learning. The concept of scaffolding draws back on Vygotsky's idea of the 'zone of proximal development', or the distance between the actual developmental level of problem solving and the potential developmental level under guidance of and adult or a more capable peer.

With respect to institutional care, day care, kindergarten and subsequent schooling play an important role in children's early language and literacy learning. These institutional contexts give minority children the opportunity to use language in a meaningful way and to receive feedback from professional caregivers. It is clear that the instructional approach and the responsivity of teachers play a crucial role. The scaffolding metaphor introduced with family interaction also applies for teacher training. Gaffney and Anderson (1991) underline the importance of an integral relationship between the processes used to prepare experts (both parents and teachers) and the methods they use to teach novices.

Whether one or more languages are used at school and which language and literacy abilities are taken as educational objectives for ethnic minority children has been extensively discussed (cf. Verhoeven, 1993). In evaluation studies the position of the L2 submersion approach of literacy instruction has been complicated by extremely contradicting results in different settings. In experimental bilingual programs in Canada (immersion programs) it was found that children speaking English as a majority language reached a high level of L2 French literacy skills without their L1 literacy skills lagging behind (e.g. Lambert & Tucker, 1972; Genesee, 1984; Kendall, Lajeuness, Chmilar, Shapson & Shapson, 1987). Quite contrary results were obtained in studies of direct literacy instruction in L2 in the United States and Europe when L1 was a minority language with a low level of societal prestige. This paradox can be solved by assuming that in the latter context the learning of L2 reflects the loss of L1. Poor results in both languages will then be the consequence, because of feelings of ambivalence on the part of the minority group toward the majority group and the majority language, as created by the social environment.

The debate on bilingual education should be evaluated against the background of a view of ethnic minority children in terms of socio-economic and second language 'deficits' rather than ethno-cultural differences. Policy makers in both Northern America and Europe have looked upon home language instruction as a temporary facility for minority children. Their focus was on bridging the mismatch in language use in the home and the school while aiming at higher results in the majority language. However, home language instruction can also be conceived of in terms of a cultural policy in which minority languages are valued in their own right (cf. Extra & Verhoeven, 1993). From a cultural perspective home language instruction can be defined as a structural facility for children with a non-native home language, independent of socio-economic background. Contribution to first language learning is then defined as an autonomous goal, while first language proficiency is seen as a school subject and accordingly being evaluated.

5 Perspective

With respect to the use of language and literacy two world-wide trends can be observed. On the one hand, there are processes of unification and internationalization through mass media, trade, labor migration and tourism. On the other hand, there is a growing awareness of the significance of cultural and linguistic diversity. A basic policy question in the area of institutional support is how to reconcile the opposite trends of unification and diversification of different communities in multi-ethnic societies. This question also dominates the language debate, given the fact that languages are prominent features of both trends and also that, within educational contexts, languages are relatively easy to promote or neglect.

It is important to note that a second-language-only approach of literacy interventions at home or at school does not fit very well with the linguistic and socio-cultural background of ethnic minority children. Given the claim that it is easier for children to build up elementary literacy skills in a language in which they have acquired basic phonological, lexical and syntactic skill, it is important to evaluate ethnic minority children's oral proficiency in L1 and L2 at the onset of any literacy intervention. A mismatch between children's linguistic abilities and the language of instruction in the literacy curriculum can then be reduced. Research data show that simultaneous and successive literacy interventions in two languages are feasible. Such programs appear to be capable of improving students' academic proficiency and do not result in any retardation of second language literacy skills.

Moreover, ethnographic studies make clear that literacy in the own ethnic language may help to enhance community and cultural identity. In this respect the social group structure plays a significant role. The need of literacy in the mother tongue is dependent on its use in institutions in the own ethnic community and on the need to learn about one's own ethnicity or to express oneself in the native language. The fulfilling of such needs can prevent the appearance of a negative self-concept within ethnic communities.

Thus, besides cognitive arguments, anthropological arguments also favor a biliteracy program in formal or non-formal educational settings. However, the actual educational programs for ethnic minority groups are not predominantly determined by such arguments or evaluation studies, but rather by political factors. The language policies of regional and national authorities determine whether or not minority groups will be in the position to become literate in the majority language, as well as in the minority language. Three types of language policy can be distinguished: language segregation, language assimilation and language maintenance (see Spolsky, 1977; Hakuta, 1986). As has been proposed by Grosjean (1982), there will be little chance for education in the minority language when a policy is one-sidedly directed at assimilation; linguistic diversity in bilingual education can be expected when the policy is to strngthen ethnic identity. According to Grosjean, language policies in multilingual societies are determined by many factors, such as the number and importance of the minority languages in the society, their geographic concentration, their linguistic development, the social and religious structure of the population, the attitudes of the minority and majority groups and the availability of teachers and learning materials. Fishman (1977) pointed out that a language maintenance program will only lead to functional bilingualism and biliteracy, if both languages find support in the wider community.

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PART THREE

INTERVENTION PROGRAMS AND EVALUATION

RESPONDING TO CHILDREN'S NEEDS

INTEGRATED CHILD DEVELOPMENT SERVICES IN INDIA

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1 Evolution of Child Care Services in India

India is a vast multi-lingual, multi-cultural and multi-religious country with a population of about 836 million people. The under-five population of India is approximately 127 million and is probably the largest in the whole world. The overall literacy rate as of 1991 averaged 52%. The female literacy rate is 39% as against a male literacy rate of 64%. Economically India is a poor country, with about 29.23% (1987-88) living below the poverty line (National Insitute of Public Cooperation and Child Development (NIPCCD, 1992). However, culturally it is a rich country with its own stock of literature, art forms, festivals, toys and games. Clearly spelled-out child rearing practices, mother-child games, lullabies and stories not only help in the transmission of culture but also play an important role in personality development of children.

The responsibility for child care in India had always rested with the family, but with the changes in the social system such as the break-up of the joint family system, migration from the rural to the urban areas, mothers' efforts to take up employment to supplement the family income et cetera, more and more families have found themselves unable to look after their young ones and have needed outside intervention.

Initially it was the voluntary organisations which played the pioneering role in setting up child-care services. After independence the government of India assumed greater responsibility and established the Central Social Welfare Board (CSWB) in 1953 to assist voluntary organisations and mobilise their support and cooperation in the development of services for women and children. In its attempts to reach out to rural women and children, the CSWB set up Welfare Extension Projects which offered services such as maternity and child care, first aid and primary medical aid, creches and preschools, supplementary nutrition for children, and craft training and social education for women. The project was evaluated in 1964 and, based on the evaluation, it was decided to develop a country-wide program of integrated welfare services for children with particular focus on the preschool child. In 1967 the Family and Child Welfare Scheme was launched with the objective to provide basic services to children and to offer basic training to women in home craft, health, nutrition, child care and income generation activities and also to extend to them the essential health and maternity services. Side by side with these projects, other nutrition projects were also launched to provide supplementary nutrition to preschool children and pregnant and nursing mothers. By 1980, the nutrition projects covered about 8.2 million children and mothers (NIPCCD, 1984).

A critical review by eight inter-ministerial teams, constituted by the Planning Commission in 1972, of programs for young children and mothers revealed that the child-care programs characterized by inadequate coverage, resource constraints and a basically fragmented approach to the needs of children were not having much impact. It became increasingly clear that the organisation of comprehensive and integrated early childhood services was probably the answer (Sadka, 1984). Based on previous experiences, the policy planners and professionals came to the following conclusions: a) the target group should be children in 0-6 age group as they are most vulnerable; b) preschool centres should be the focal point of delivery of services; c) there should be an integrated package of services for the development of the preschool child whereby all services should converge on the same group of children; d) the coverage should be extended to the entire project rather than only 5 to 10 centres for a population of 100,000 as in the earlier schemes (NIPCCD, 1984).

The mid-seventies also witnessed other important events such as declaration of the National Policy for Children, constitution of the National Children's Board and setting up of the National Children's Fund. The National Policy for Children recognised children as 'the nation's supremely important asset' and declared the nation's responsibility for their 'nurture and solicitude'. The National Children's Board was set up to focus attention on the welfare and development of children and to ensure continuous planning, review and coordination of all essential services for children (NIPCCD, 1984).

2 Integrated Child Development Services: aims and objectives.

In pursuance of the National Policy for Children which laid emphasis on the integrated delivery of early childhood services and services for expectant and nursing mothers, the ICDS scheme was evolved to make a co-coordinated effort to deliver a package of services, aiming at the total development of the young children (NIPCCD, 1984). It was launched on an experimental basis in 1975 by setting up 33 projects.

The objectives of ICDS were:

a) To improve the nutritional and health status of children in the age group 0-6 years;
b) to lay the foundation for proper psychological, physical and social development of the child;
c) to reduce the incidence of mortality, morbidity, malnutrition and school dropout;
d) to achieve effective coordination of policy and implementation among various departments to promote child development; and
e) to enhance the capability of the mother to look after the normal health and nutritional needs of the child, through proper health and nutrition.

The concept of ICDS is based on the belief that the early years of childhood are most crucial for the subsequent development of the child. Development in early childhood is rapid and deprivation suffered in early years is likely to affect subsequent development. It is therefore important to provide the services to young children right from the beginning. It was also seen that an intersectoral program will be better able to deliver a package of services in an integrated manner and that its impact would be far more than the sum total of the impact of individual services provided through different sectoral programs to different groups of children. The convergence of services at the same time on the same group of children would yield much higher dividends in terms of their development. The ICDS takes a holistic view of the child and the mother and recognizes the importance of maternal well-being for the healthy development of children. It therefore offers a package of services for the children as well as for the mothers and mothers-to-be (see Figure 1).

Figure 1: Services offered by ICDS

Beneficiary	**Services**
Children below 3 years	Supplementary nutrition Immunisation Health check-up Referral services
Children 3-6 years	All the four services plus non-formal preschool education
Expectant and nursing mothers	Health check-up Immunisation of expectant mothers against tetanus Supplementary nutriction Nutrition and health education
Other women 15-45 years	Nutrician and health education

The ICDS at present includes 2696 projects of which 64.2% are in rural areas, 28% in tribal areas and 8.7% in urban areas. While selecting the location for a project, preference is given to those areas which are predominantly inhabited by vulnerable and weaker sections of society, i.e. scheduled castes, scheduled tribes and families in absolute poverty. Such target groups are likely to be found in economically backward areas, drought prone areas and areas in which nutritional deficiencies are rampant and development of social services is poor.

While this applies in general to rural, tribal and urban situations, there are differences in the socio-cultural characteristics of these three target groups. While 48% of the rural households covered under the project are marginal and landless farmers, in the tribal areas the percentage goes up to 69%. The urban projects are located in urban slums which are predominantly inhabited by scheduled castes. The occupational profile is entirely different here with most falling into the categories of unskilled or semi-skilled workers, shopkeepers or unemployed. Interestingly the rural projects cater to a higher percentage of social groups other than the scheduled castes and tribes. In terms of educational levels, approximately 45% of the target group across the three target groups are illiterate while 49% have been through some years of schooling. The National Evaluation of ICDS does substantiate the fact that this program reaches out to the lowest income group with 77% in the rural group, 82.8% in the tribal group and 69.7% in the urban group reporting a monthly income of less than Rupees one thousand per month.

Each ICDS project aims at a total coverage of a compact area preferably a whole block in rural and tribal areas or a group of slums or wards with a population of about 100,000 in urban and rural areas and 35,000 in tribal areas. A rural or urban project consists of about 100 centres called Anganwadis (AW's), literally meaning courtyard centres, while a tribal project consists of about 50 centres. Each centre has on the staff one worker and one helper. They are by and large local women who are first sponsored by the community and then trained for a duration of three months. Each project has about four to five supervisors and one Child Development Project Officer (CDPO) who holds the overall charge of the project

Projects are sanctioned annually by the Department of Women and Child Development of the Ministry of Human Resource Development, Government of India, after discussion with the Planning Commission and State governments. The allotment of projects is based on need, demonstrated capability to implement and commitment to the program. States with greater resources do initiate additional projects supported entirely with their own funds. There is normally a time gap of about 12 to 18 months between the sanctioning of a project and the beginning of the delivery of services, which is the time required to identify project sites and establish the Anganwadis (AW's).

3 Training and monitoring in the ICDS context

Once the project site is selected and approval obtained from the Central Government, the State Government initiates the selection and training of the three levels of staff: the CDPO, the Supervisor and the Anganwadi Worker (AW-worker). All AW-workers and the supervisors are women but as regards CDPO's, it has not always been possible to have only female CDPO's.

A uniform curriculum has been developed by the National Institute of Public Co-operation and Child Development (NIPCCD) for the pre-service training of all three tiers. The CDPO's are trained for two months at NIPCCD in child development, accounting, finance management, survey techniques and community organisation. The three months' training of AW-workers is being done by the non-governmental organisations and home science colleges. The course content includes courses in child development, community work, identification of disabilities, record keeping, survey techniques, family planning, preschool education and nutrition and health education. The supervisors also undergo three months' training, the content of which is similar to the AW-worker's training, with an added managerial component. Their training is done either by home science colleges or schools of social work in the universities.

The responsibility of monitoring the implementation of the ICDS program is shared by the Department of Women and Child Development, the Central Technical Committee and the National Institute of Public Co-operation and Child Development. The basic data originated at the AW's is supplemented by periodic surveys and special studies. The records maintained by the AW-workers of immunisation, health check-up, births, deaths, attendance at preschool learning centres, supplementary feeding, nutrition and health education and growth charts are consolidated by CDPO's and forwarded to district and state monitoring cells from where it goes to the central government. The health component is monitored through monthly reports sent by the medical officers of the Primary Health Centres to district and state directorates of health. In addition the Central Technical Committee also undertakes special studies and follow-up of the base line studies. The social inputs are monitored by a special cell located at NIPCCD through data collected by consultants based in university departments of home science and social work.

4 Evaluation and Impact Studies

The Planning Commission of India conducted two major evaluations of ICDS in 1978 and 1982. The positive results of these evaluations led to the decision of the Government of India to accelerate the expansion of ICDS in 1982. UNICEF supported an independent assessment in 1983 which clearly established the cost-effectiveness of the program. It studied the outreach of the program in 16 ICDS projects spread over eight states and one union territory. The study, which was based on observations, secondary data and interviews of beneficiaries, mothers of children below six years, reported positive outcomes such as substantial enrolment of scheduled castes and tribal children as beneficiaries (NIPCCD, 1992).

During the eighties several academic institutions also conducted micro-level impact studies of ICDS. A major chunk of ICDS studies has been on health and nutrition components of the scheme. During the period of 1976-1988, about 624 baseline repeat surveys and over 250 research studies carried out by the medical personnel focusing on crucial health and nutrition indicators like infant mortality rate, nutritional status, morbidity patterns, immunisation coverage et cetera indicated a definite improvement in the health status of the target population covered by ICDS (Tandon, 1990).

The next group of studies focused on preschool education, which is another important component of ICDS. Preschool education is conceived within ICDS as a preparation for primary education and is aimed at reducing the school dropout rate and improving retention in grades 1 and 2 of primary school. With an approximate 50% of children on an average dropping out of grade 1 itself, dropout has become a major national concern. One of the reasons for this large scale exodus from schools in the early grades is the lack of cognitive, linguistic, social-emotional and psychomotor readiness in children to meet the demands of primary schooling. Preschool education is envisaged as a program for helping children develop this preparedness and is therefore considered a significant input for the extension of elementary education. It also facilitates the extension of elementary education to girls by providing substitute care to the younger siblings, leaving older girls free to attend school. But for this it is essential to have the AW's schedule coincide with the primary school schedule.

While anganwadis all over the country function from early in the morning, there are regional variations so far as duration is concerned. In the northern and eastern regions the three to six year olds come into the AW for a duration of one to two hours whereas in the southern parts of the country children stay for as long as five hours in a day.

In actual practice even though children may stay longer, preschool education is transacted for not more than two hours every day six days of the week. The daily routine of an AW begins with cleaning of the AW by the helper who then goes out to collect and bring children in, if necessary. Once the children come in, the AW-worker begins the session with a cleanliness check-up, warming-up exercises and prayer. This is followed by an hour or two of preschool education after which the children are provided the nutritional supplement, along with the other beneficiaries. The worker then updates her records and registers and the afternoon time is spent either on home visits or convening community meetings. The curriculum for the preschool education component in ICDS in which the AW-workers are trained is development oriented and thematic in content with an emphasis on play the way methodology. A theme is given for each week around which all developmental activities are to be interwoven. Stress is laid on concept formation and development of language skills through stories, rhymes and conversation. The children in the AW's are a mixed age group of three to six year olds. Generally they are kept together in a large group for all activities due to lack of space or convenience of the worker. As a result most activities get targeted at the four year olds.

While a development-oriented curriculum is advocated, in practice more and more AW's are succumbing to parental or community pressures and beginning to teach the 3R's instead to these young children, since these provide more tangible indicators of children's achievement. Conscious and systematic efforts are now being made to discourage this practice by providing a structured two-hour schedule of preschool activities on a daily and weekly basis.

Studies of the impact of preschool education have generally yielded positive results. A follow-up study of the AW children showed that the children who attended AW's were better adjusted and picked up new materials faster in the first two years of schooling (Sunderlal, 1981). Two other studies showed that, in comparison with non-ICDS children, children attending AW's scored higher in language and cognitive development (Khosla, 1985) and performed better in first and second grade of primary school (Sood, 1986). Another study showed a significant positive relationship between the competence of the anganwadi worker and the cognitive scores of children especially in the 4-plus and 5-plus group (Pandey, 1988).

As a part of the Project on Monitoring and Evaluation of Social Components, five in-depth studies were conducted on the preschool component in five different ICDS blocks. Of the 15 AW's included in the larger project two AW's at the extreme polarities were identified in terms of quality of programs through participatory observation. These were termed 'highest ranking' and 'lowest ranking' AW's. A non-ICDS area in the neighbourhood was selected as control. Comparisons among these showed that: a) the AW children had higher scores in motor skills, conceptual and readiness skills, language skills and personal social behaviour when compared with non-ICDS children; b) the performance of preschool children from the highest ranked AW's were better on all skills except personal social behaviour in comparison with children from the lowest ranking AW's; c) the performance of primary school children who graduated from AW's was better in grades one and two compared to non-ICDS children. Moreover the children who came from highly ranked AW's excelled in academic performance and school adjustment when compared to children who came to the primary schools from the lowest ranking AW's; d) the level of awareness of the mothers about the value of preschool education and health and nutritional needs of children was higher in the ICDS area then that in the non-ICDS area; e) awareness and involvement in child care were better in the mothers of the highest ranking AW's than in those from the lowest ranking AW's (Sharma, 1987).

The need to ensure some degree of quality control becomes imperative, particularly if one considers the findings of the larger project indicating that children in many AW's come only to collect food. Often AW's are devoid of play material or attractive display. In terms of activities, except for singing rhymes and counting, no other stimulating activities get carried out in the daily program.

The other type of studies undertaken was intervention studies. These studies were conducted based on the assumption that given adequate training the AW's should be in a position to run fairly satisfactory preschool programs. The major findings were: a) even in remote tribal areas, with semi-literate workers, it was found that after a short training of the AW-workers and supply of minimum materials the AW-children from the experimental group performed much better in language and cognitive tasks after eight months of intervention as compared to children in the controlled group whose AW-workers did not receive any training (Muralidharan & Kaur, 1984); b) there was a significant difference between pre and post-intervention scores in the knowledge and skills of AW-workers and in the cognitive abilities of children (Shahni, 1984); c) intervention through radio broadcasts coupled with supply of guide books for AW-workers resulted in a better performance of children in language skills (Muralidharan, 1990).

Though a fairly good number of studies were done during 1980-1990, most of them were micro-level studies conducted on specific target groups with limited sample size. In 1990, the Department of Women and Child Development proposed to undertake a comprehensive review of the scheme and entrusted the NIPCCD with the task of undertaking an evaluation of ICDS at the national level. The national evaluation study was carried out during the years 1990-1992.

The national evaluation study was conducted with the objectives of ascertaining the benefits of the ICDS scheme and the differences in implementation and utilization of services in urban, rural and tribal areas, of identifying problems and bottlenecks and of ascertaining the degree of community involvement in the implementation of ICDS. The sample for the study was drawn from 54 rural, 28 tribal and 18 urban projects selected from the 25 states and one Union Territory. The findings of the study, with particular reference to family, school and literacy, were as follows:

a) a large majority of AW's (60%) were found to have clean surroundings and in around 75% AW's, drinking water through taps and hand pumps was available;
b) as compared to earlier evaluations, there was a definite improvement in the educational qualifications of AW-workers. Fifty percent of AW-workers had completed ten years of schooling and 13% had higher qualifications.
c) the time allocation for the AW-workers were one to two hours for pre-school education (60%), one hour for nutrition programs (79.2%) one hour for maintenance of records (80%) and one hour on home visits' (50%);
d) the coverage of 3-6 year olds for the pre-school program was around 56% in the urban and rural areas but it was a little less in tribal areas;
e) comparison between ICDS and non-ICDS areas indicated that relatively a very small number of children (23.5%) were receiving preschool education in non-ICDS areas as compared to 85% in ICDS areas.
f) while 50-56% of the children attending AW's could do rote counting and manipulate crayons with control, a very small percentage of non-ICDS childeren could recognize or identify colours;
g) of all the children in the age group 4-15 years, both in ICDS and non-ICDS areas, 89% of the children with preschool experience were

found to be continuing their education in primary school as compared to 52-60% without preschool experience. Less percentage of the children with preschool experience was found to be in the never enrolled category in both ICDS and non-ICDS areas;

h) of all the children currently in primary school, 85% in ICDS areas had preschool experience while only 15% had it in non ICDS areas.

5 In conclusion

The Government of India's National Policy on Education 1986 (NPE) gave due importance to Early Childhood Care and Education (ECCE). It viewed ECCE as a crucial input in the strategy of human resource development, as a feeder and support program for primary education and as a support service for working women. Realising the crucial significance of rapid physical and mental growth during early childhood, it was recommended that ECCE program should be holistic in nature and should aim at the total development of the child, including physical, motor, cognitive, language and social-emotional aspects.

Though there are many types of ECCE programs running in the country, ICDS is the largest, with 290,000 AW's serving nearly 14 million children and 2.7 million mothers. The Program of Action 1992 formulated to implement the National Policy has set the target of increasing the AW's to 375,000 by 1995. In addition attempts will be made to improve the quality of the on-going programs by strengthening training of ECCE personnel, setting up project-level resource centres, providing basic play materials for AW-children and establishing linkage between AW's and primary schools.

While describing the content and process of ECCE, the Program of Action 1992 advocates an approach for the total development of the child. In addition to regular medical check-up, supplementary nutrition and growth monitoring, the program should include child-centred and process-oriented play activities aimed to foster joy and curiosity in children, promote language and cognitive skills, develop creativity and confidence, and promote muscular development. It is also stated that norms and minimum standards will be devised with a view to ensuring better quality of ECCE practices. All efforts are being made to establish linkage between ECCE centers and primary schools. At the moment planning is under progress for district-level primary education programs under the Social Safety Net Scheme wherein ECCE and convergence of services have been identified as an important core component.

ICDS is probably the world's largest scheme for preschool children and mothers. It has been in existence for more than fifteen years and has yielded dividends in terms of a decrease in infant mortality rate, better nutritional status of children and higher enrolment and better retention in primary schools. It has reached out to poor and needy families and has made ECCE services accessible to them. The ICDS workers at the grass roots level are mostly local women of the community who easily identify themselves with the needs and problems of the families. These women are considered as honorary workers and paid a nominal honorarium of Rs. 400 per month. The intersectoral approach of ICDS as well as the involvement of voluntary organisations, social activists and professionals are some of the major strengths of the scheme. Keeping these points in view, it is felt that this scheme can be replicated in other socio-cultural contexts to reach out to children and mothers with similar problems and needs.

However, a word of caution probably is in order. Rapid expansion of services does affect the quality of programs. It is essential to develop an adequate monitoring system before large scale expansion is done. Training of the ECCE personnel is crucial as much of the success depends on the workers. For example, a worker with fairly low educational qualifications needs to be guided on what is good ECCE and what is not. Otherwise she may emphasise aspects such as rote memory and formal learning instead of fostering cognitive and language skills in children. The existing scheme of an initial three months' job training followed by a short refresher after a few years is not adequate. Both to refresh skills as well as sustain their motivation continuous training inputs are essential at the field level for the workers.

Again, studies have indicated that preschool education per se is not enough; the quality of the program is important. Therefore, though it is essential to make the scheme cost-effective, this does not mean that the preschool centers should be bare and ill-equipped. The provision of a basic minimum of play materials is an absolute necessity. If a scheme is state-supported, very often the community is not willing to extend any support. It is therefore desirable to build in community participation and involvement before the scheme is launched. The programs cannot remain state-supported for ever. The speed and efficiency with which the program will grow will be determined by the willingness of the community to match the government commitment to the well-being and development of their children.

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EMPOWERMENT OF PARENTS "PROYECTO PADRES E HIJOS" IN CHILE

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The present contribution is intended to describe an educational program for parents and preschool children living in conditions of poverty in Chile, the Parents and Children Project (Proyecto Padres e Hijos). The project was developed by the Centro de Investigación y Desarrollo de la Educación (C.I.D.E), a non-governmental organization. The purpose of the project is to empower mothers and fathers in their parental role and to stimulate children's interactions with their family and their environment, in order to promote healthy socio-emotional, cognitive and biological development. The chapter centers on four central issues: the historical development of the project over a twenty-year period (1); the participation of non-professional volunteer monitors who coordinated the group meetings (2); the impact on mothers' perceptions of their parental abilities and on children's development, of a participatory educational approach (3); and going to scale from a pilot experience with a reduced number of groups, to a large number of groups related to governmental and non-governmental institutions (4).

1 The project and its history

The program was created during 1971 at C.I.D.E. The project can be viewed as a laboratory school where different cultural, geographical and political contexts confronted the Project's teams with new questions, new challenges, new answers (Cerri, 1990; Bastías, 1981). It was initially created as an alternative to kindergarten for children of poor rural areas (Richards, 1971). Teachers in rural schools were prepared to hold weekly meetings with parents of children from age 0 to 6. The challenges involved were to design the curriculum, to train teachers, to motivate parents and to create new educational materials. The specific aim was to prepare children to enter the primary school.

Two main influences can be traced in the origin of this experience . On the one hand, some trends originating in the Northern Hemisphere, specifically the Head Start movement which stressed the importance of family involvement and early childhood intervention. On the other hand, the Chilean socio-political environment of 1972, with the socialist government of President Allende focusing on social participation and on the improvement of the living conditions of the poor, created favorable grounds for innovative educational projects.

The 1973 military coup meant a dramatic shift in this scenario. While the Allende government saw the program as a contribution to its plans for national education and for social development, the military government considered it a threat. Instead of continuing to work at the public primary schools, the efforts were now directed to community organizations, mostly related to the Catholic Church or to NGOs, as for instance the 'comedores populares' (popular kitchens) (Yáñez, Martinic, Silva & Torres, 1977). The adult education element of the program was reviewed, introducing Paolo Freire's framework for the development of a participatory and active education (Freire, 1970).

After the program was banned from public preschool education and primary schools, the program was monitored by community members. New content was added, mostly related to environmental problems that have a bearing on children's development, such as malnutrition, alcoholism, or environmental sanitation. Community organization was targeted as a central objective. In addition, specific materials were designed for use in working with children at home. Mass media components were introduced in some areas, as for example in Osorno, in Southern Chile, where the project was developed in association with 'La Voz de la Costa,' an educational broadcast network (CIDE/PESMIB, 1977).

Gradually, the program began to represent an answer to the need for social participation of the communities in poor rural and urban areas. Children were the explicit center of interest, but the real needs encountered were the needs of impoverished communities to organize and express themselves at a time when they were isolated and silenced.

In 1986 a new version of the program was designed, focusing on the needs of children from age 0 to 4 (Undurraga & Araya, 1987). The emphasis was placed on parent-child relationships, and the project was no longer considered a substitute for preschool education. The work was carried out in poor urban areas, in collaboration with the community organizations and preschool centers. The group monitors were either mothers from the community or pre-school teachers.

In 1990 the program was revised in response to the new demands created by the re-democratization of the country (Araya, Cepeda & Valdés, 1992). The challenges that needed to be addressed included going to scale and establishing collaboration with governmental organizations. Taking into account the accumulated experience, the program was re-created and revised. In addition, specific topics related to child development and to the transition from family and the preschool stage to primary school were added to the curriculum. This new design integrated the Project 'Transition from Family to School,' funded by the Bernard van Leer Foundation, Netherlands. The work was carried out in different settings: community organizations, NGOs, government services such as the National Health Care Service of the Ministry of Health, and municipalities. Finally, it is important to mention that international funding played an important role in making these developments possible. At present, however, a gradual shift towards national funding is taking place, in which various institutions such as Social Development Departments of different municipalities, the Ministry of Health, and the 'Hogar de Cristo' welfare organization which shelters poor children, are adopting the program.

2 The project in its present form

General context

At first sight Chile offers a promising and positive image: 95% of the population is literate; 100% of school age children are enrolled in the first-grade of primary school; the GNP is of US$ 1,320 (World Bank, 1988) as compared to US$ 600 in Bolivia. Nonetheless, the results of the 1992 Household Survey (MIDEPLAN & UNICEF, 1993) reveal that nearly 40% of the population lives in poverty. The income of this group is so low that basic nutritional and non-nutritional needs are not being met.

This situation contrasts with the increasing economic modernization occurring in the country. The gap between life conditions and future opportunities for children of poor and of rich families continues to widen.

The results of a recent study conducted with a sample of 851 families living in poverty illustrate some of the negative consequences for the children: 22% of children suffered from some degree of malnutrition; 50% of the group of five year old children presented deficits in language development (Bralic, Edwards & Seguel, 1989). The general level of schooling of parents in poor areas is rather high: 42% of the mothers in the sample had some experience in secondary school, which indicates 9 or more years of schooling.

With regard to primary school education, drop-out rates are extremely high, especially in the first and second grade, where children have difficulties in learning the written language (Filp, 1987). This in turn, affects their future learning opportunities; the scores of the National School Achievement Test of children from poor areas are 20% lower than those obtained by middle class children (42% vs. 61% in the Spanish test, eighth year of primary school).

It has been suggested that preschool attendance has a positive impact on the acquisition of reading skills of poor children. However, the studies conducted so far do not support this hypothesis. For example, it has been found that one year of Kindergarten attendance does have an impact on the readiness for reading of poor children at the beginning of the first grade. However, achievement scores on reading tests administered at the end of the first grade do not reveal differences between children who have attended preschool, and those who have not (Filp, 1987).

Different explanations can be offered for this finding. On the one hand, it might relate to the type of preschool education involved, where limited time is devoted to literacy and to cognitive skills. On the other hand, it is also possible that Kindergarten does not have the expected impact on school learning, because it does not work with the child and her family. Several documents show that family involvement in preschool intervention programs has a positive impact on children's development (Myers, 1992).

Family involvement is considered one of the strategies to promote equity in children's lives and in their learning possibilities in Chile. According to the 'National Plan for Children' the two main goals for children in Chile are: (1) to decrease the prevalence of developmental problems amongst children who live in poverty; (2) to decrease the prevalence of school dropout in the first two years of primary school. Parents' participation is considered as one of the central lines of action for achieving both goals. In addition, the collaboration of the NGOs with the government is stressed as one of the means to provide the necessary services (República de Chile, 1992).

Family involvement is also considered one of the strategies to complement formal preschool education, but in practice this collaboration has not been successfully implemented on a larger scale. One reason is that the programs are not successful in motivating a more permanent participation of parents, as preschool teachers adopt a paternalist attitude toward parents, and the topics treated are not relevant to mothers or fathers.

The 'Proyecto Padres e Hijos' attempts to address some of these problems. In the following subsections we will describe the actual procedures, the theoretical foundations, and some of the results.

Program elements

The program is organized in weekly meetings of nearly 10 to 15 parents (usually mothers). A team of two monitors, previously trained by a professional group from the 'Centro de Investigación y Desarrollo de la Educación' coordinates the meetings. They promote group discussions centered around a selected topic, usually supported by specifically designed educational materials, simulation games and group activities. At the end of the meeting, parents receive teaching materials which will allow them to carry out specific activities with their children at home.

With regard to child development, the conceptual foundations of the program are inspired in the works of Erickson (1966) and Piaget (Piaget & Inhelder, 1969). The biological, psychological and social dimensions of the child are considered to be an integral unit. The concept of developmental tasks, as well as the importance of the child's interaction with her environment provide the foundation and guidelines for the design of the educational material and for the definition of the curriculum. In addition, concrete action is considered the foundation for the development of thinking, and children are considered active agents who shape the interactions in which they engage.

The curriculum is built upon three main concepts: (1) child development as an interactive and integral (biological, social, cognitive and emotional) process; (2) characteristics of children at different ages (from birth until age five) and the developmental tasks they face; (3) the role played by parents through the provision of love, acceptance, protection, guidance, mirroring and challenges.

The contents are organized around 5 different units which unfold through a total of 16 group sessions. The main foci of the units and the order of their presentation are as follows:

Unit I.
"Who said that educating is an easy task?" (problems regarding child-rearing, expectations in relation to the program).

Unit II.
"The Children's Needs" (the concept of integral development)
"Step by Step, We Are Growing," (Development as a process)

Unit III.
"I look, I touch, I hear and I can move" (The child from 0 to 1 year)
"Toy Workshop" (for children from 0 to 1 year)
"I can talk, walk and say I want to pee" (for children age 1 to 2)
"Toy Workshop" (for children age 1 to 2)
"I learn by playing" (for children age 3 to 4)
"I talk and discover, I talk and express myself" (for children age 3 to 4)
"Toy Workshop" (for children age 3 to 4)
"Next year I will go to school" (for children age 4 to 6)
"Numbers and Words" (children age 4 to 6)

Unit IV.
"Children and Their Sexuality" (Parents guide their children in their discovery of sexuality)
"Standing in Your Children's Shoes" (Communication)
"Educating with Love and Limits" (Communication)

Unit V
"Our Rights and Responsibilities" (Parents and the agencies responsible for child care and education)
"What We Take with Us" (Final evaluation),

There are materials intended for monitors and materials designed to be used by mothers and their children at home. The first include a 'Manual' describing and explaining the program, advancing guidelines for its development and for the sessions, as well as for their evaluation. Different types of simulation games, specifically designed for implementing the different sessions are also included. The material submitted to parents consists of six different booklets with games and activities to be carried out with their children at home.

The monitors

The training of the group monitors follows in a certain sense the clinical supervision model. First, the monitors experience the sessions as if they were participant mothers. A critical reflection on the experience, guided by the professional training team, allows monitors to elaborate on the underlying educational principles of the project. Special emphasis is placed on the communicative skills of the monitors. Each training session lasts nearly two hours, where almost two-thirds of the time is dedicated to the experiential component, and one third to the reflective, analytical metacognitive component. (Araya, Cepeda & Valdés, 1991). When monitors begin to work with community groups, the sessions are observed by one member of the training team. The observations are discussed with the monitors, who in turn meet once a month with other group monitors to exchange experiences, the lessons learned, and questions.

The potential users of the project are contacted and introduced to the project with the aid of a video. The organization is responsible for selecting their monitors. The only prerequisites are that they can read and write and that they show an interest in this type of work.

The monitors role is that of an educator, whose task is to create the conditions required by the group participants, in order to develop their potentials and capabilities as mothers and fathers to their children. The monitor conducts the sessions in such a way as to allow the participants to express themselves and to put their experiences into words. "Putting their experiences into words" is one of the processes that contributes to the empowerment of parents. Discussions are encouraged and information is provided when requested, and the group is stimulated to formulate its own conclusions. The monitor is therefore considered as a guide and a facilitator of an educational experience for adults. Monitors also play a promotional role, because they encourage ideas regarding child welfare and happiness[4]. In this respect, monitors do not play a neutral role. Monitors are organizers, in that they plan the development of the program as a whole, they prepare each session, and evaluate it.

The educational approach of the program is an invitation to learn in a different way. Participants share the responsibility of learning, and the experiences of the 'educator' and the 'learner' are central components of the process. Memorizing of new facts is replaced by understanding, by learning through experience, by the expression of feelings and the discovery of new ideas. Considering the usual disqualification to which men and women subject themselves and which they experience in interaction with others, this approach allows for the reconstruction and the re-evaluation of their own experience, which in turn contributes to their empowerment as parents and as creative human beings.

From August 1991 to July 1993 a total of 171 monitors were trained; 146 of them finished their training (85%). Most of these monitors have formed groups of mothers and are currently implementing the program (92.5%) Fewer than half of the monitors (31%) work in an institutional setting, such as local health clinics or preschool centers. The rest are members of the community. Ninety-two per cent of the monitors formed groups and are implementing the program.

Their ages range between 20 and 51 years (31 years as an average), and their average level of schooling was incomplete secondary education (see Table 1).

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[4] It seems strange to talk about happiness in an academic document, but apparently this word has no scientific synonym.

Table 1: Monitors' Level of Schooling

Illiterate	2%
Incomplete primary education (less than 8 years)	13%
Complete primary education	8%
Imcomplete secondary education	17%
Complete secondary education	17%
Technical education	21%
No information	18%

It is important to note that in this case illiteracy was not an obstacle, because monitors work in a team of two persons. The monitors with technical education were either preschool or nursing assistants. In earlier phases of the project the monitors had lower levels of schooling (from four to 7 years), which was not an obstacle for the implementation of the project. Almost half of the monitors were employed, and half of these were working in the field of childhood care. The other half were not employed and had no regular income. A large majority of the monitors were mothers (58% married, 26% single, 7% separated and 6% living with a partner). It was difficult to determine the level of family income of monitors. According to the information gathered, 75% of the group had a family income of US$200 or less; 64% reported a family income of US$144, which is extremely low (a bus ticket amounts to US$0.40, a kilo of bread costs US$0.50, a pair of shoes US$10).

The families

Recruitment of families, who in practice were represented by mothers, was carried out by the monitors using different procedures. Door-to-door recruitment was the most frequently used strategy. Mothers and other family members were invited to a first motivational meeting. Usually three to four meetings of this type were held in a community before the program started. During 1992, a total of 27 groups were organized, reaching as many as 259 families and 583 children. It is important to note, however, that only 3% of the participants were men. The drop-out rate was 20%. It is also important to mention that 7% of the participants were teenage mothers. The majority of the mothers' ages ranged between 21 and 35 years. The average level of schooling was incomplete secondary education. Despite the relative high levels of schooling, these women and families are poor, with limited access to good quality educational services.

3 Theoretical foundations

Parents as mediators

Even if the objectives of the program relate to child development, adult education is central because parents are directly involved in the program. One of the problems that arises is that poor families tend to under-estimate their own parental ability, a tendency which is reinforced by the prevailing social prejudice with respect to the capacities of poor people. For example, research conducted with first grade teachers, and with preschool teachers shows that they describe poor families as "alcoholics, delinquents, mentally retarded, lacking culture and not interested in their children" (Filp, Cardemil & Valdivieso, 1984). This tends, on the one hand, to block parents' expression of their values and capacities. On the other, it leads to discriminatory pedagogical practices in primary school. Teachers in schools for poor children reduce their levels of expectation; they ignore children's questions and demand and ask closed questions. Teachers' behavior in middle-class schools is completely different: open questions are more frequent, children are encouraged to take the initiative and their requests are taken into consideration (Filp, 1987). Another aspect that contributes to parents' insecurity is that regarding child-rearing practices, they put a higher value on the opinion of teachers and health professionals than on their own (Filp, Ochoa & Maureira, 1993).

With respect to the parents' awareness of their children's needs, it is interesting to note that they tend to be more attentive to the biological than to the psychological needs of children. A recent study about child-rearing practices and beliefs reveals that mothers in poor sectors believe that children are not psychologically influenced by their family environment until they begin to speak. In addition, limited awareness exists about the child's psychological needs (Cabello, Ochoa & Filp, 1992; see also Bralic, Edwards & Seguel 1989). Parents tend to have a rather deterministic perception of their child's abilities. They tend to believe that children are born with 'a head good for studies' or not. As a consequence, they feel that they cannot do very much to help the child (Bastias, 1983).

It is also important to note that these households have very limited access to books, magazines, newspapers or children's books (Filp, 1987), and that adults seldom read, be it on their own or with the children. This contrasts with the importance assigned to reading in middle class families.

One of the goals of the project is to establish the conditions for parents to recover their confidence in their parental abilities, by providing information about children and their needs, and through support groups for parents. This in turn is expected to influence the child's development in positive ways. There is some empirical and conceptual support for this hypothesis, elaborated by McLoyd (1990), who proposed a model for analyzing how poverty and economic loss affect black children. One of the assumptions of the model is that the relationship between poverty and negative effects on children's development is mediated by parental distress and parental behavior, and that there are external moderating variables that may reduce their psychological distress and influence their approach to parenting. From these moderating variables, McLoyd proposes actions to support parents, such as: (1) emotional support, (2) informational support and role modelling, (3) parenting support, and (4) exercising child-rearing sanctions (see Nunes, 1993). Within this framework, it can be noticed that the project "Padres e Hijos" proposes to improve the conditions in which poor children grow up, by providing emotional support for parents, and through information, support, and role modelling.

The educational approach

It was mentioned that the approach to adult education was initially inspired by Paolo Freire. However, his ideas were not adopted in an orthodox way. Rather, they acted as a catalyst to sensitize the team to the specific needs of different groups in poor communities, and to the power issues present in the educational process. It led to the creation of social contexts in which poor people could speak (say their word), build on their experience and organize as a group to take action in matters that affect their lives (see also García-Huidobro, Martinic & Ortiz, 1989). Modifications were introduced, especially through the design of simulation games to stimulate group discussion. Information was provided when required by the groups (nutrition, alcoholism, communication skills, preparing for school).

The modifications introduced follow in some way the different phases identified in the development of popular education in Chile. According to Undurraga et al. (1990), it is possible to distinguish three different phases in the development of popular education rooted in Freire's thought. The phase of the 'catacombs,' at the beginning of the military dictatorship where 'reparation' of the harm caused by persecution and repression was one of the main benefits. The second phase is one of 'expression'; groups gather to discuss their lives and problems. Finally, during the third phase of 'organization,' groups reconstruct their social network, define common goals, take actions. At present, a fourth phase commences, in which one of the important questions relates to the construction of knowledge by the participant groups.

4 Going to scale

It is not uncommon that very interesting innovative programs never manage to leave the safe port of the organization where they were conceived. The present program was not immune to this tendency. However, the conjunction of favorable political conditions and international funding, has enabled us to revise the program and attempt different popularization strategies; this has opened the doors of different institutions, so that during 1992 a total of 45 monitors were trained, 27 groups of mothers were formed, attaining 259 adults and 583 children. Different types of institutions adopted the program: preschools of municipalities, private preschools, the 'House for Women' a social organization. During 1993 several private and governmental organizations requested the program, and they are beginning to pay for the service. It is expected that during 1993 nearly 1500 children will be reached through the Ministry of Health.

Experience has shown that two aspects are central to the successful transfer and popularization of the program: the attitudes and capacities of people trained as monitors, and the willingness and conditions of the institutions that are interested in adopting the program as part of their regular activities.

With regard to the first point, it should be mentioned that monitors easily handle the contents of the program, but find it difficult to practice the participatory approach: this often clashes with the traditional way of relating to mothers and fathers in poor sectors, which involves giving lectures or solutions. This problem is frequently present with those monitors who are professionals, (nurses, medical doctors, psychologists, preschool teachers, teachers assistants). This tendency was not so strongly observed among non-professional monitors, especially among members of the same community, who were able to establish egalitarian relationships with the group members.

As far as the institutional conditions are concerned, explicit support of the authorities is essential. This support is expressed in different ways, such as making available a physical space to hold the meetings, and the assignment of a representative of the institution who is responsible for the program and participates in the training sessions of the monitors, as well as in the follow-up sessions. The degree of flexibility of the institution is also important, expressed in the extent to which certain changes are possible (for example, in time schedules, administrative procedures, provision of materials, etc).

5 The program impact

The impact on mothers

Analysis of the formative evaluation reports prepared after each group session shows that mothers reported an increased self-esteem, increasing confidence in their parental ability and increasing awareness of the child's emotional and cognitive needs. These changes become evident in new activities at home, the school and the community. The following statements made by mothers illustrate these changes. (see Fuenzalida & Jiménez, 1993; García & Higueras, 1992).

> "I have not talked too much. I am shy, but I have done things, important things to me, I am a humble person. What happened is that my son who is 19 was ill, I took him to the hospital, he was so ill, he had pneumonia. A nurse undressed him and told him he had nothing. I just stood there and said to her: 'Lady my son has pneumonia and I am not leaving'. Then the doctor came and said my son had it. The nurse wanted to drive me

> off but I told her I would stay by my son. Then the doctor came and I told him I was not going to bother, I ask him to let me stay, I was not going to bother, I just wanted to be close to my boy."
>
> "How can I say it, I arrived like a little thin thing and I'm leaving like a nice, round teddy bear, all puffed up with strength. I now will be able to speak up, to tell the teacher at school to treat my child well."
>
> "The relationship with the mothers, with the monitor made me react and see my responsibility. What one did not know, the other did, we learned we are all the same and we all respected each other's opinions. The union within the group helped us to be close and grew more confidence."
>
> "With my neighbor, we now talk. We lived so many years here. Now we help each other, in the house and with the children."

Impact on children

During 1975 and 1976 a quasi-experimental study was carried out, to assess the impact of the program on the intellectual development of the children whose mothers participated in the project (Filp, Balmaceda & Jimeno, 1977). The Wechsler Intelligence Scale for Preschool Children (standardized for Chile) was administered to three different groups of children, using a repeated measures design: 17 children who attended a preschool in a rural area (preschool group), 23 rural children whose mothers participated in the project (project group) and 15 rural children who were not attending preschool and whose mothers did not participate in the project (comparison group). The third group changed its status after four months, because the primary school of the community opened a Kindergarten. This was a result of sensitizing the school principal to the importance of preschool education, through our visits to the community. She had contacted the children for our study, after we explained our purpose.

The measures were conducted before the program started, after 4 months and after 8 months. The statistical analysis of the results showed that the total coefficient increased over time, for both the project group and the preschool group. The average increase of total IQ was 7.6 points after eight months for the project group, and 6 points for the preschool group. This change could be attributed to the fact that children learned to take the test. However, it is also interesting to note that the increase is similar, given that in one case children attended preschool daily, and in the other, the mothers participated once a week in the project's group meetings.

In a later study, related to the project implementation in Osorno (Richards, 1983), teachers of three different first-grade classrooms conducted a blind classification of children's reading skills using four categories: excellent, good, acceptable and deficient. The project group received higher evaluations than children whose parents had not participated.

Table 2: **Reading Skills of Children at the Beginning of First-Grade as Evaluated by the Teacher. Comparison Between Project and Non-project Group**

Category	Project	Non-project	Total
Exellent	5	2	7
Good	15	17	32
Acceptable	9	24	33
Deficient	0	6	6
Total	29	49	78

Similar results were obtained using a modified version of the 'Draw-a-Person' test. (Richards, 1983) The results are shown in Table 3.

Table 3: **Evaluation of Drawing a Human Figure. Comparison Between Project and Non-project Group**

Category	Project	Non-project	Total
Outstanding		1	1
Excellent	5	1	6
Good	10	5	15
Acceptable	9	10	19
Deficient	5	10	15
Poor	1	6	7

The children of families who are currently participating in the project have not been already evaluated. However, it is possible to make some inferences about changes on the basis of the information provided by participant mothers. Some of the dimensions that appear as important are the following: Love, violence, verbal interaction and emotional needs.

The following comments made by participant mothers illustrate how they perceive those changes (see Fuenzalida & Jiménez, 1993; García & Higueras, 1992; Bertrán & Jiménez 1993).

> *Love:*
>
> Mothers comment that they feel and act more lovingly, that they enjoy their children. Ester explains: "Now I am more relaxed with my children, I have changed because I have applied what I learned here. I didn't know what it means to share with him, to play with him. I now give a lot of importance to those moments."
>
> Maria comments that she had decided not to beat her children. At home she explained to them to stay away from the fire because it would harm them and hurt. "The children understood, I did not have to beat them. I even was nicer to them, I hugged them, and the children said to me: "you do love us now."

Violence:

A recurrent issue in mothers' evaluation of their participation in the project, is the decrease in physical punishment and more protection of the children from exposure to violent situations. Carmen tells the group that before she was very strict in controlling her sons' homework. "I told them that study is the only thing that will help them in life, that's why I beat them, scold them and never excuse a fault there...yesterday he did not complete his homework and I counted till ten before hitting him. I asked him what had happened and first he lied to me, but then he told the truth. He even said to me: "What happens to you that you ain't going to beat me?"

Violeta comments that now she does not quarrel with her husband in front of the children. "Now, when my husband wants to discuss I tell him that we should go to the yard, because I know it is not good for the children to hear us argue."

Verbal interaction:

Mothers report that their increased awareness of their children's needs results in more frequent conversations with them.

Floriana says: "I learned to see my children, to know how they are, how they feel, to understand what happens to them. I now talk to them and they tell me what they feel, what they want."

Isabel comments: "I am more relaxed now, I have changed with my child. I didn't know what it means to share, to play with him, talk; I now give importance to each of these moments. My son has noticed these changes. He comes close to me more often, he talks to me. Now I know what to do to help him in his development and I don't have to wait for others to tell me what to do."

Emotional needs:

Participation in the program helped mothers to become sensitized to the emotional needs of the children.

Sara comments at the end of one group sessions. "I feel confident, I know my child more deeply, she can express her feelings. That's what we talked about, sexuality. Now I know it is natural and that it is better to amuse her. Before I was drowning in a glass of water, it was so difficult, but now I know that we have all gone through the same."

6 Conclusions

The "Proyecto Padres e Hijos" represents a strategy to empower parents who live in urban marginal areas. It offers a model to train monitors of the community, who in turn implement the program with different groups. It is not an alternative but rather a complement to Kindergarten. The educational materials are easily used and adapted to different cultural conditions. The results of the program are that mothers feel more self-confident about their parental abilities, that they become more aware of the needs of their children, and take more concrete actions in different institutions, to demand quality services for their children. The impact on children has also been positive. Different evaluations document gains in cognitive development and in psychological health.

Some of the problems to be solved in the future are: the low participation of fathers, the development of a curriculum more relevant to the needs of unwed teenaged mothers and to women who are household heads. It is also necessary to conduct follow-up studies of the children, in order to obtain further evidence about the impact of the program on their development.

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A large number of persons have contributed in different ways to the programme over its twenty years of existence, but as they are too numerous we cannot name all of them here. Their efforts and achievements today are part of the project.

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CULTURE SENSITIVE HOME INTERVENTION

THE DUTCH HIPPY EXPERIMENT

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The Netherlands

1 Introduction

There is a great discrepancy between what schools expect of children and what underprivileged parents, and especially ethnic minority parents, offer their children. As a result, children from underprivileged families often start their school career with educational arrears. Home intervention programs have been developed to prevent or make good such arrears. In this chapter the nature of the mismatch between such programs and the target groups and various strategies to bridge the gap will be examined, in the light of our evaluation research on HIPPY, a home intervention program aimed at preparing young children for school.

2 HIPPY

HIPPY -Home Instruction Program for Preschool Youngsters- is a two-year program for mothers and 4 to 6 year old children from underprivileged families. It was developed for the benefit of immigrant families of oriental origin in Israel by Prof. Avima Lombard of the Hebrew University of Jerusalem (Lombard, 1981).

The underlying principle of HIPPY is to help the mother educate her preschool child at home. Both mother and child are expected to benefit from the program. The mother will learn new attitudes and skills congruent with the demands of modern schooling and will gain confidence in her ability to help her child learn, and the child will develop intellectually so that he or she is ready to learn in school (Green & Cohen, 1979).

Intervention programs vary in their setting (home-based vs. center-based), structure (structured vs. non-structured curriculum), scope of activities (limited to language, cognitive and intellectual development, or to the child's total development) and targeted subjects for change (individuals, or families and communities). This variety stems not so much from the ultimate goal that nearly all programs have in common -i.e. improving the chances of disadvantaged children at school and in society- as from the diverging views and theories on the appropriate strategies for realizing this goal (Eldering, 1990/1991).

HIPPY uses various strategies to involve all the mothers of the target groups. First, HIPPY is carried out in the home. Research on the implementation of center-based community programs showed that women's attendance rates were poor and irregular (Lombard, 1981). In home programs the pace of learning can be adjusted to the mother's ability, specific problems can be identified and dealt with, and mothers can be supported and encouraged to continue participating in the program. In the original pilot project in Israel no group meetings were planned. A comparison between mothers who had participated in HIPPY with mothers who were not enrolled in the program showed no evidence of any change in the HIPPY mothers' views of themselves as educators (Davis & Kugelmas, 1974), and therefore group meetings were subsequently incorporated in HIPPY, to enable mothers to share experiences about the program and their problems, learn from the experience of others, and internalize some of the program's objectives through active discussion.

Second, HIPPY uses a structured curriculum: the program is split into 60 weeks, with a clear assignment for each week, involving five prescribed daily activities. It is known that structured programs are more effective in stimulating children's cognitive growth. The underlying principle when developing HIPPY was to build up the mothers' confidence as teachers. If they can carry out the activities successfully, they will be satisfied and be motivated to become more involved. Furthermore, programmed instruction is considered to be a suitable approach for mothers who have little experience with educational activities at home. Detailed, written instructions are provided for each activity; the mothers merely have to carry them out in the prescribed order.

The curriculum focuses on three major areas of intellectual functioning: formal language, sensory discrimination and problem solving. Language instruction centers around simple story books (18 books in a two-year period). Using books with young children requires the reader and the child to interact verbally. In the course of reading a range of skills is developed: questions are asked about the details of the story, vocabulary is learned and concepts are introduced. The concepts that are emphasized throughout the program fall into three general categories: attributes, spatial relationships and quantities. About one-third of the HIPPY materials concentrate on providing activities in the field of perceptual and sensory discrimination skills (visual, auditory, and tactile skills, in that order). One of the main problem-solving activities in HIPPY involves the extensive use of series of matrices. The focus during the first year is on books and on the development of discrimination skills, and by the second year the emphasis shifts to problem solving (Lombard, 1981).

The third way of involving all the mothers of the target groups is to use paraprofessionals as home visitors. The paraprofessional familiarizes the mother with the weekly materials and activities. She visits the mother at home to discuss the activities of the previous week and to explain to her and train her with the materials for the next week. By making weekly reports the paraprofessional monitors the progress of mother and child through the program. Paraprofessionals are mothers selected from among the target group, preferably mothers with a child of the same age as the program children. There are two main reasons for using mothers from the target groups as home visitors: they have better access to the families because of their cultural affinity and they make a program less expensive. Since the HIPPY materials and tasks are prescribed and almost self-explanatory, it is assumed that the program does not need professionals to deliver and explain them.

From 1969 to 1972 HIPPY was tested on 161 mother-child pairs in several neighborhoods in Tel Aviv. The children were monitored during their primary and secondary school years. The outcomes of this longitudinal evaluation showed that the home-instructed children did significantly better than the control children. The evaluation of this pilot project in Tel Aviv reflects the way many compensatory and intervention programs were evaluated in the sixties and seventies; by means of a pre-test and--post-test design with experimental and control children, with the emphasis on quantitative effects of the program on the intellectual development of children and their school performance (Eldering, 1991).

Since 1975 HIPPY has been implemented throughout Israel as part of the Ministry of Education's Welfare Program. To date, more than 6,000 mothers and children have participated in the program every year. Since 1982 HIPPY has been used in other countries too. The first project of HIPPY International was in Turkey (Kağıtçıbaşı, Sunar & Bekman, 1988; Kağıtçıbaşı, 1989, see also Kağıtçıbaşı in this volume). So far, HIPPY programs have been or are being implemented in 20 countries (including the US, Chile and South Africa). The program in the Netherlands is the first in Western Europe. Currently, more than 3,000 children are participating in the Dutch HIPPY program.

3 HIPPY's target groups in the Netherlands

HIPPY's target groups in the Netherlands are predominantly ethnic minority families. The Netherlands has experienced several flows of immigrants from former colonies (the Dutch East Indies, the Moluccan Islands, Surinam and the Antilles) and from Mediterranean countries (predominantly Morocco and Turkey) in recent decades. At present, Surinamese, Antillians, Moluccans, Turks and Moroccans are the most important groups, numbering about 700,000 (5% of the total population). With the exception of the Moluccans, the ethnic minority groups consist primarily of first-generation immigrants and their children. The immigrants tend to be concentrated in cities with more than 100,000 inhabitants; about 40 per cent live in the four major cities of Amsterdam, Rotterdam, The Hague and Utrecht. The ethnic minority groups have a subordinate position; they have low educational levels, experience high unemployment rates and live in unfavorable housing conditions (Roelandt, Roijen & Veenman, 1992).

Many children from ethnic minorities are socialized in their parents' first language; Moroccan children learn Tarifit Berber or Moroccan Arabic, Turkish children Turkish, and Antillian children Papiamento. Children from linguistic minorities generally have an insufficient proficiency in Dutch upon entering primary school (Boogaard, Damhuis, De Glopper & Van den Bergh, 1990; De Ruiter, 1991; Verhoeven, Extra, Konak, Narain & Zerrouk, 1990). Much of the educational arrears of children from underprivileged families can be ascribed to children's development in preschool years (Meijnen & Riemersma, 1992). Theoretically, intervention programs for young children, therefore, have great potential to redress the imbalance.

Recently the preschool period has become a target of the Ministry of Welfare, Public Health and Culture's policy in the Netherlands. HIPPY is one of the programs currently being implemented and funded on a large scale by this Ministry.

4 The implementation and effects of HIPPY

The Dutch HIPPY[5] began in 1987 as an experiment involving Dutch, Surinamese, Turkish and Moroccan mothers with a four-year-old child. The project consisted of two interconnected parts: development and implementation by the Averroès Agency in Amsterdam and evaluation by the Centre for Intercultural Pedagogics at Leiden University. Both these parts were funded by the Dutch Ministry of Welfare, Public Health and Culture for a five-year period (1987-1992). The HIPPY experiment had two main goals:

- to see whether the HIPPY program could be transferred to ethnic minority groups in the Netherlands;
- to study the program's effects on children and mothers.

Method

In the HIPPY experiment we studied the implementation and effects of the program in Dutch, Surinamese, Turkish and Moroccan mother-child pairs. The mothers were to have had no more than 10 years of full-time education and the children were to be no younger than 3 years 9 months and no older than 4 years 6 months. Baby clinics and kindergartens supplied us with the addresses of about 500 mother-child pairs that satisfied these criteria. About 350 of these 500 families were invited to participate, and of these 141 mother-child pairs agreed to do so (56 Dutch, 29 Surinamese, 33 Turkish and 23 Moroccan) working in 12 mono-ethnic groups. A non-response study established that the participating families did not differ from non-participating families in certain demographic characteristics such as education, rate of unemployment and number of children. A comparison with data from several national surveys on demographic characteristics and social position of minority groups in the Netherlands confirmed that the families participating in HIPPY were representative of the whole population of ethnic minorities in the Netherlands (Eldering & Vedder, 1992). The experimental and control children were not randomly assigned. Children were selected from the same neighborhoods, using the same criteria for age, ethnicity and mothers' educational level as for the experimental children. Differences in project plans and budgetary constraints precluded us from having a Dutch control group, but a total of 117 Surinamse, Turkish and Moroccan control children participated in the study.

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[5] In the Netherlands HIPPY has been renamed OPSTAP. In this chapter we have retained the internationally known name HIPPY.

We used a quasi-experimental design for the Surinamese, Turkish and Moroccan groups, and for all groups a correlational design exploring the interrelationship between the intensity of participation and measures of effect, see Figure 1.

Figure 1: Quasi-experimental design of the HIPPY evaluation

	Pre-test	**Program**	**Post-test**
Experimental	Info. about neighbourhood ethnicity Intelligence	Drop-out Intensity of participation	Intelligence Language skills Classroom behavior
Control	Info. about neighbourhood, ethnicity Intelligence		Intelligence Language skills Classroom behavior

To check the comparability of the experimental and control children we measured their intelligence before the start of the program. We found no statistically significant differences. A non-verbal intelligence test was also used as a post-test, as well as a Dutch language test and a rating scale for classroom behavior. Effects were analyzed by comparing the experimental and control groups.

Results

Just over 40% of the mothers dropped out of the program. The highest drop-out rate was in the Dutch group (54%) and the lowest in the Moroccan (22%). The drop-out rate in the Surinamese and Turkish groups was about 37%. About 80% of all drop-out occurred in the first year of the program, mostly in the first six months. The drop-out of better educated mothers was statistically significantly higher than that of less educated or illiterate mothers. The two reasons the mothers gave for dropping out were family circumstances (60%) or the program (40%). Pregnancy, health problems and the difficulty of combining the daily household chores and regular participation in the program were often mentioned. Mothers who said they stopped because their children grew annoyed with the program usually had additional reasons for stopping.

Mothers are expected to invest a fair amount of time in carrying out the program: two activities each day for five days a week during 60 weeks over a two-year period. We found that on average, the Dutch, Surinamese and Turkish mothers worked with more than 70% of all the week's tasks. The Moroccan mothers, however, did just over half of the week's tasks.

The HIPPY implementation plan prescribes a weekly contact, either through a home visit or through a group meeting. In our study, all ethnic groups except the Moroccan had group meetings. In the first year there were eight meetings on average, with 45% of the mothers participating, and in the second year there were seven meetings with a 55% participation rate. The functions of the weekly contacts include evaluating the activities of the previous week, explaining the work sheets for the coming week and instructing the mothers on how to work with the new sheets. In the Surinamese group less than half of the planned contacts took place. Many week tasks were not supported by any contact. In the Dutch and Turkish groups the number of contacts was also less than the number of week tasks. These discrepancies between number of contacts and number of week tasks mean that the evaluations cannot have taken place every time mothers had finished a week task. And worse, instructions for a new week's task must sometimes have been omitted. Only in the Moroccan group did the number of week tasks parallel the number of contacts. These findings clearly indicate a discrepancy between the ideal of the program developers, that families participating in HIPPY would have intensive and regular support, and actual practice during the experiment.

Almost 60% of all mothers stayed until the end in the program. This is a major achievement, since the families eligible for participation in HIPPY are generally hard to reach and difficult to retain in an intervention program (Kloprogge, 1993; Smith & Wells, 1990). The drop-out rate in our experiment was comparable to that in the pilot project in Tel Aviv (Lombard, 1981). Compared with the Turkish program (see Kağıtçıbaşı in this volume) the drop-out in our program was quite high. One of the probable reasons for this difference might be found in the situation of the mothers. Two-thirds of the mothers in the Turkish project were factory-workers, who were allowed to attend the group meetings during work-time, whereas about four-fifth of the mothers in the Dutch programs were housewives. A second important conclusion is that although the program was sufficiently implemented, its implementation had some shortcomings.

To measure the efficacy of the program we used tests and asked the mothers for their opinion on HIPPY (self reports). The families were generally enthusiastic about HIPPY. Mothers were convinced that their children had learned quite a lot by working with HIPPY. Sixty percent of the mothers reported that they themselves had become better educators. However, we found no evidence of HIPPY enhancing the intelligence of children, though we did find improved eye-hand coordination in the total group of Surinamese, Turkish and Moroccan children. Most measures of competence in the Dutch language showed no improvement. The Moroccan children who participated in HIPPY, however, did statistically significantly better on a Dutch vocabulary test than the control children. Furthermore, we found statistically significant positive correlations between the intensity of participation and the children's cognitive development (SON-R) and classroom behavior (diligence), controlled for pre-test intelligence scores.

Overall, the effects of HIPPY are small and only revealed in subtests. The improved eye-hand coordination is attributable to the large number of tasks in the program intended to enhance this skill. The vocabulary effect in the Moroccan group is more encouraging. As will be explained in the following section, the Dutch, Surinamese and Moroccan families received a Dutch version of HIPPY whereas the Turks used the Turkish version of the program. The attention paid to vocabulary development in the program is not systematic (Pels, 1990). This might mean that the program does not contain enough enriching elements for Dutch and Surinamese children, who already speak and understand the Dutch language quite well, but that it has an enriching function for Moroccan children, who grow up in an environment in which Dutch is used infrequently.

We have to conclude that the overall-effects of the Dutch HIPPY-experiment in the Netherlands are small, whereas the pilot-experiment in Tel Aviv and the Turkish Early Enrichment Project both showed significant effects on children and in the Turkish project on mothers too (Lombard, 1981; Kağıtçıbaşı, Sunar & Bekman, 1988). Here we have a case of a replication of evaluations with different outcomes (see Slavenburg in this volume). These differences in outcomes may be explained by factors relating to the way the program was implemented, cultural characteristics and needs of the target families and the societal context of the various projects. Kağıtçıbaşı (in this volume) ascribes the differences in outcomes between the Turkish and the Dutch project to the way the group meetings have been organized. If this explanation is correct, we have a problem in explaining the effects on children in the Tel Aviv pilot project, in which no group meetings have been held. The issue of the implementation of HIPPY in relation to its impact on children and mothers needs further crosscultural and crossnational attention. In the following section the cultural characteristics of the target families in the Netherlands and the way HIPPY has been adapted to their situation, will be discussed.

5 Role of cultural differences

Acculturation and cultural differences

Home intervention programs are intended to change the behavioral patterns of child rearing and support in the family. It may therefore be assumed that there is initially a difference between the family's behavior and the desired behavior. The success of a program depends largely on how far it succeeds in bridging this gap. This process becomes even more intricate when cultural differences between the target group and the mainstream group in society are involved.

In our case, the program's target groups consist predominantly of first generation immigrant groups with cultural traditions differing from those of the dominant society. Culture may be seen as a way of thinking, speaking and behaving of a group in a particular context (cf. Geertz, 1973). By definition, culture is not a static entity, but a dynamic 'tool' shared by a group to regulate their life in a particular environment. After migrating to a country with a different cultural tradition and social context, a process of rapid culture change (acculturation) evolves, the outcomes of which may vary and which depend on many characteristics of the immigrants and society. Immigrants who consider it valuable to have relationships with other groups in society and do not value the preservation of their own culture assimilate quickly in the host society, whereas immigrants who value relations with other groups in society, but at the same time try to preserve their cultural heritage, integrate mainly instrumentally in the host society and develop an ambivalent attitude vis-à-vis that society (Berry, 1990). Other possible negative outcomes of the acculturation process are marginalization and separation. The direction of the acculturation process, however, is not only a matter of free choice as Berry's model presupposes. Most immigrants are obliged to have relationships with other groups and institutions in society (labor market, neighborhood and schools) and have to give up at least part of their intrinsic culture in order to be able to function in the new society.

The interaction between societal forces and minorities has a great impact on the outcomes of the acculturation process (Ogbu 1987, 1992). Ogbu identifies two types of ethnic minorities: immigrant and involuntary. Immigrant minorities are people who have migrated more or less voluntarily in search of better economic opportunities. Involuntary minorities are people who have experienced slavery, conquest or colonization.
Immigrant minorities and involuntary minorities usually differ both from the dominant group in culture (including language) and social identity, but the quality of the differences is different. Immigrant minorities are characterized by primary cultural differences, intrinsic differences that existed prior to emigration. After immigration a process of acculturation starts in which the newcomers adapt to the new society. Immigrant minorities view the differences between their culture and that of the dominant society as obstacles that have to be surmounted in order to integrate in the new society and to improve their and their children's economic situation.

Involuntary minorities, on the other hand, have developed secondary cultural differences in response to the discrimination and subordination experienced from generation to generation. Secondary differences tend to be differences in style rather than in content. They have developed in reaction to the treatment by society and are therefore seen as boundary markers vis-à-vis the dominant society and as collective identity symbols. There is great resistance to relinquishing these secondary cultural differences, and the group exerts strong pressure on individuals who try to conform to the standard of the dominant society. African Americans, Indian Americans and Mexican Americans are given as examples of involuntary minorities and Asian Americans as examples of immigrant minorities.

Although most ethnic minority groups in the Netherlands may be considered to be immigrant minorities with cultural characteristics which existed prior to migration, some groups are already showing signs of evolving secondary cultural differences (Eldering, 1992). The attitudes of the ethnic minorities to Dutch society undoubtedly influenced the implementation of the HIPPY experiment, as will be demonstrated below.

Ambivalent attitude towards Dutch society

First-generation immigrants in the Netherlands often have an ambivalent attitude towards Dutch society. They are uncertain whether they will settle permanently in the Netherlands or return to their home country. Many keep the return option open by investing in housing in their country of origin (Van den Berg-Eldering, 1981; Risvanoglu-Bilgin, Brouwer & Priester, 1986). This tendency grows stronger in times of economic recession and growing xenophobia. Ambivalence towards the host society is caused not only by economic conditions, but also by differences in culture. Ethnic minority parents have high aspirations for the future of their children. They hope that their children will improve their situation by schooling. But at the same time they want to preserve their language and traditional values (Eldering, 1992; Eldering & Vedder, 1992; Lenders & Van de Rhoer, 1983; Pels, 1991; Roosens, 1989; De Vries, 1987; Van de Wetering, 1990). These values concern religion and family life. Religious values have a great impact on relations between men and women. Inequality of men and women, for instance, is a feature of Islam which in traditional Moroccan and Turkish families may lead to segregation of males and females. Women's activities are limited to the domestic sphere, whereas men play a dominant role in public life. Outsiders are not allowed into the domestic domain.

A home intervention program, by definition, intrudes into the domestic sphere of a family. To be acceptable, a home intervention program has to meet at least the following conditions: program goals and family goals have to be identical and the program has to be introduced and trained by persons who are accepted and trusted by the families of the target group. The first condition poses no problems, since ethnic minority families generally have high educational aspirations for their children, girls as well as boys. These aspirations are often higher than those of Dutch lower class families and they approach those of middle class families. To meet the second condition HIPPY uses women from the same ethnic group as home visitors. These women are familiar with the culture and find it easier to gain access to the families. In our study, however, it appeared difficult to find enough home visitors with the same ethnic background, because few ethnic minority women met the educational standards required. Moreover, eligible home visitors were sometimes not permitted by their husbands to associate with 'foreign' families. Home visitors from the same ethnic group do not always succeed in gaining confidence and enrolling mothers, particularly if they are viewed as representatives of the dominant group in society. In some neighborhoods the recruitment of families proceeded more smoothly than in others. In one of the neighborhoods with many orthodox muslim Moroccan families, it took many months to gain access to families and establish a Moroccan group. The Moroccan mothers living in this neighborhood were forbidden by their husbands to attend group meetings.

Illiteracy

Illiteracy among the target mothers is another factor affecting the success of HIPPY. On average, ethnic minority groups of the first generation in the Netherlands have less schooling than their Dutch counterparts. However, there are substantial differences among the ethnic groups, with Surinamese approaching the Dutch in years of schooling, and Turks and Moroccans being towards the bottom of the scale. Women are generally less educated than men. Nearly half of the Moroccan men and two-thirds of the Moroccan women in the Netherlands are illiterate, compared to only 12 per cent of the Turkish men and 30 per cent of the Turkish women (Roelandt et al., 1992). Two-thirds of the Turks and 75 per cent of the Moroccans in the Netherlands have only had primary education, compared with 20 to 25 per cent of the other minority groups in the Netherlands.

Illiterate and semi-literate mothers are faced with difficulties when participating in an intervention program using written instructions and books. In order to involve illiterate mothers in the program too, HIPPY uses a strategy to maximize oral training. The home visitor familiarizes the mother with the weekly materials by role-playing. This mode of instruction is assumed to be non-threatening for uneducated mothers, since it emphasizes action and talking, rather than reading. The mother and the aide alternate in assuming the role of mother and child. We found that this strategy did not solve all the problems of the illiterate mothers. Many illiterate mothers in the HIPPY experiment needed the assistance of an older child, usually a girl, to read the books to the HIPPY child. Sometimes the girls read the book aloud to the whole family.

The second strategy to involve uneducated mothers, which has already been mentioned, is to structure the program in such a way that mothers know in advance what activities have to be done with the child. Some critics find this strategy too inflexible. None of the ethnic minority mothers, however, mentioned the structure of the curriculum as a point of criticism in the interviews with the researchers. In designing a program the possibilities as well as the limitations of the target groups and the home visitors (in our case paraprofessionals from the same ethnic groups) should be kept in mind (Eldering, 1993; Vedder, 1993).

Language

The effectiveness of HIPPY also depends on the language of implementation. In Israel and Turkey the program is carried out in the national language, Hebrew or Turkish. Most ethnic minority mothers participating in HIPPY in the Netherlands, however, are first generation immigrants, who arrived here after they had completed their school education. Their Dutch language proficiency varies from reasonable (Surinamese) to poor or non-existent (Turkish and Moroccan mothers). Many children of first-generation immigrants are socialized in their parents' first language (Turkish, Moroccan Arabic or Berber). This was the main reason for deciding to offer the families the program in their own language rather than Dutch and for setting up monolingual groups. A second reason was that immigrant

families who remain oriented towards the language and culture of their country of origin are more easy to enrol in a program that uses this language rather than Dutch. Paraprofessionals had to be bilingual in order to communicate with the mothers as well as the project staff. In reality, however, it has proved to be difficult to find paraprofessionals that are fluent in both their own language and in Dutch. Many are not really proficient in Dutch, which leads to problems of communication between them and project staff (Van der Linden, 1993).
The strategy of offering the mothers the program in their home language did not work for the Moroccan mothers, because their home languages, Moroccan Arabic or Berber, are spoken languages with no written versions. Standard Arabic, the language children learn at school in Arab countries, differs greatly from the national dialect, Moroccan Arabic. A second problem was that most Moroccan mothers were illiterate; they read neither Standard Arabic nor Dutch. Moreover, the older girls who assisted their mothers with book reading were more proficient in Dutch than in Standard Arabic. For these reasons it was decided to offer illiterate and semi-literate Moroccan mothers the books and materials in Dutch. The Turkish mothers, who generally had some years of schooling in Turkey, used the materials in Turkish.

Currently, in the Netherlands HIPPY is available for four language groups: Dutch, Turkish, Arabic and Papiamento. Although this multilingual approach is congruent with Dutch educational policy, which advocates a bilingual approach to young children from ethnic minority families who are not fluent in Dutch, it complicates the implementation and organization of the program. During the experimental phase, for instance, it proved difficult to recruit a sufficient number of mothers for one ethnic group (each group consists in principle of 15 mother-child pairs), even in urban districts with a high concentration of ethnic minority groups. Most high concentration urban districts have an ethnically heterogeneous population. There are various ways of solving this recruitment problem: setting up bi-ethnic or multi-ethnic groups, reducing the ratio of paraprofessionals to mothers, or expanding the age range of eligible children. These solutions all have advantages as well as disadvantages, which are beyond the scope of this chapter (see Eldering & Vedder, 1992).

6 A mismatch between expectations and the program

In this section, two elements of HIPPY, which might also be responsible for the program's disappointing effects are discussed: the implementation strategy and the curriculum.

The implementation strategy

In section 4 we presented our findings on drop-out and the intensity of participation. The figures presented are not exceptional, and some policy makers and researchers take such figures for granted when working with the type of at-risk families that participate in HIPPY (Kloprogge, 1993; Van Tilborg, 1990). However, we are not convinced that working with at-risk families necessarily leads to high drop-out and low participation rates. In the case of HIPPY the complexity of the implementation strategy may have contributed to the implementation problems. Two aspects of this strategy will be discussed here, the multi-layer information flow and the paraprofessionals. Van Geert (1992) has advocated the need for transparent information flows between persons involved in the implementation of HIPPY: supervising institution (training) <-> coordinators (professional educators) <-> home visitors (paraprofessionals) <-> mothers <-> children. The top-down flow concerns instruction or training. It goes without saying that if a paraprofessional does not understand the coordinator's instructions for a particular step in the implementation, the actual implementation runs a great risk of failure. The more intermediaries (coordinator, paraprofessional, mother) there are in an implementation process, the greater the chance of information becoming distorted, and the greater the risk of problems in implementation (Rand, Robertson & Smith, 1992). Instruction and training, however, should ensure that not only the top-down flow but also the bottom-up flow is as transparent as possible. Good trainers or teachers adapt their training to the information need they perceive or experience, by observing the trainees' activities or in the light of information directly given by the trainees or mothers/children. Here again the effects of problems at one transmission point are likely to be multiplied at the other points. Recently we conducted some small studies on the coordinators' and the paraprofessionals' functioning. We observed some transmission problems related to the Dutch bilingual context. Some coordinators, as stated earlier, cannot easily communicate with their paraprofessionals, for the simple reason that the paraprofessionals are not sufficiently proficient in Dutch, whereas the coordinators are not proficient in the paraprofessionals' first language. Some paraprofessionals told us that they do not inform the coordinators about relevant problems in families, because they feel that the information is confidential. All such information problems may adversely affect the program's implementation, and this is difficult to remedy because of the lack of diagnostic and remedial instruments. In an effort to solve this problem, a monitoring system with the following variety of functions is currently being implemented:

- controlling the program's implementation;
- identifying where and when the implementation should be improved;
- evaluating parts of the program, and
- listing the modifications to the program made at local level.

Coordinators and paraprofessionals are the main suppliers of information within the system. We attempted to demonstrate to them that using the monitoring system would help improve their functioning. How well this has succeeded is currently being assessed (Vedder & Pennings, in prep.).

Curriculum aspects

HIPPY's goal is to prepare children for a good start in primary school and to make them good pupils. To achieve this the curriculum is wide ranging and involves: books reading; visual perception; eye-hand coordination; auditive discrimination, concepts concerning space, quantity and numbers; memory; verbal expression and reasoning; and awareness of self.

In the Netherlands all 4 and 5 year olds attend primary school for 23½ hours a week. They have a broad curriculum and well qualified, generally well motivated teachers. HIPPY is intended to augment to this program. In terms of time it involves an extra of 90 minutes a week. This may be quite a long time for mothers who have many other things to do, but compared with the 23½ hours of school time, or with the time children have available apart from time for school and sleeping, it is very limited, or non intensive -which partly accounts for the disappointing results of home intervention programs like HIPPY. The effectiveness of time spent on educational activities, however, depends on the quality of the activities (see Leseman in this volume). Two aspects of this quality are the contents of the task and mothers' didactic support. In her chapter, Snow (this volume) explains that activities that contribute to children's vocabulary and decontextualized discourse skills are important for their literacy development and later schoolsuccess. The programmed approach of HIPPY, which prescribes what mothers and children should say, hardly allows for decontextualized discourse or any other type of rich communication which is deemed important for children's vocabulary development. So at least as regards the development of children's literacy, the program is not a clear support to school learning. It is not part of a comprehensive approach aimed at preventing children from falling behind in learning. Yet such a comprehensive approach is deemed indispensable if a home intervention program is to be effective (Madden, Slavin, Karweit, Dolan & Wasik, 1991; Slavin & Madden, this volume).

In describing some problematic aspects of HIPPY's implementation we have already referred to paraprofessionals lacking the skills and experience to function as good teachers. Mothers instructed by such paraprofessionals are probably no better teachers. As mentioned earlier, the didactic qualities of parents or other caregivers as teachers are important for children's preparation for school. Compared with untrained or less trained caregivers, trained caregivers are more interactive, talkative, didactic and cognitively demanding (Clarke-Stewart, 1991). The question is whether mothers and paraprofessionals can be trained to become better teachers. One possible way of compensating for the shortcomings of paraprofessionals is to organize more well prepared group meetings where more skilled staff support mothers in building resource networks and in finding ways to transfer newly acquired skills and knowledge to everyday educational situations.

7 Conclusion

Our study showed that it is possible to involve hard-to-reach families in a home intervention program like HIPPY, but the recruitment and drop-out showed how difficult this is and how much effort it requires. The families that stayed in the program completed two-thirds of the activities on average and were generally very satisfied with the program. They were convinced it was effective. However, the measures we used in our evaluation study revealed that the impact of HIPPY has been modest.

In the introduction we stated that a home intervention like HIPPY may be seen as a means to better prepare children for school. It is meant to bridge the gap between what schools expect of children and what children of ethnic minority parents normally learn in their educational environment in and near their home. We have discussed how HIPPY was adapted to the socio-cultural characteristics of ethnic minority families in the Netherlands and concluded that HIPPY has not worked optimally for a variety of reasons, some of which were linked to the program and others more to its organization. Some implementation problems will be resolved in due course, others may remain (Eldering & Vedder, 1992; Vedder & Bekkers, 1993).

For future implementation and studies of HIPPY it seems important to pay further attention to two topics: a) the position of HIPPY in a more comprehensive approach to early education of children and parental support; b) the potential and limitations of paraprofessionals.

A comprehensive approach

A comprehensive approach would mean that HIPPY would be responsive to children's and parents' developmental needs and wishes and at the same time would be a bridge to the preschool and primary school curriculum. This condition is not fully met by HIPPY, at least not in the Netherlands.

Another aspect of comprehensiveness regards follow-up. Parents who have learned and been stimulated to support their children's preparation for primary school, should be given the opportunity to continue their support once the children are in primary school. It is well known from other studies that if support is not continued the gains in educational developmental wash out. Schools should provide instruction and materials to parents, thereby allowing them to help their children. In the Netherlands this is being done through a new program called OVERSTAP, which aims at consolidating children's language and reading skills learnt in school (Vedder & Klaassen, 1993). At the moment programs covering the age range of 0 - 7 years are being developed and implemented in the Netherlands (Rispens & Van der Meulen, 1992). This is seen as an important effort to guarantee ongoing educational support for young children and their families. Slavin and Madden (this volume) also plead for a comprehensive approach to young children up to grade 3.

Finally, a comprehensive program should address children as well as parents, their primary educators. It should aim at changing parents' educational attitudes and knowledge (Kağıtçıbaşı, 1989). Parents are the most important developmental resources to children, so if their attitudes and knowledge are changed the children's home environment becomes more developmentally stimulating. HIPPY tries to change primary educators through group meetings and the home component. Our study showed that the question remains of how to implement group meetings and the home component in such a way that these components of the program will be effective.

Paraprofessionals

It has been assumed that paraprofessionals facilitate the acceptance of the program, because they have better access to the families and are familiar with the culture of the community. They speak the family's first language, they are preferably also the mother of a young child, and have an ethnic background and level of education comparable to the mother. This makes it likely that the family will trust them. And indeed, as stated in section 4, the participation of families that are difficult to reach and retain has been exceptionally good. Moreover, using paraprofessionals is financially attractive, since their remuneration is relatively low. This low remuneration, however, results in a high percentage of paraprofessionals deciding to change job in the course of the program. Furthermore, whereas the target families undoubtedly relate good to such paraprofessionals, this means that the HIPPY program rests on women with limited skills in teaching. They are given the responsibility of explaining and training educational principles to mothers and adapting the program to families' and children's needs. This may have contributed to HIPPY's disappointing results. Could these shortcomings be overcome by training, or would it be better to employ more qualified staff? Are the paraprofessionals' qualities as first-language speakers and positive role models really as crucial to establishing relationships of mutual trust and respect as has been assumed? Other home intervention programs and the organization of the medical and paramedical sector in Western countries show that better qualified staff, with a different ethnic background to the families they are working with, may also gain the trust of ethnic minority families (Vedder, 1993). It remains to be seen if HIPPY would benefit if better qualified staff were to work with the target families.

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A MODEL OF MULTIPURPOSE NON-FORMAL EDUCATION

THE CASE OF THE TURKISH EARLY ENRICHMENT PROJECT

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1 Introduction

A multi-purpose model of non-formal education which has great relevance for socio-economically disadvantaged populations will be presented. In this chapter in terms of a ten-year research project. The intervention used in this project is two-tiered with early enrichment provided to the young child using the mother as teacher, and mother-training and support provided to the adult. Thus this multi-purpose education model involves both preschool and adult education. It is a cost-effective non-formal education model which is community based. It originated from a concern to provide early support to children in disadvantaged contexts and thus basically targets the preparation of the young child for school. However, its scope extends beyond the child, to support the child-in-context, the mother symbolizing the context (Kağıtçıbaşı, 1989).

Children growing up in poverty are often hampered in their physical and intellectual development and may not have the chance to develop to their full potential. Given the importance of early years for development, any intervention to support the child's development has to start early, and has to deal with the child's environment as well. The last point, that is, targeting the child's environment, necessitates an interactional-contextual approach and can be used in home or community based programs of early childhood care and education. This approach is quite different from a more narrowly focussed individualistic approach abstracting the child from his/her environment and targeting the child, alone.

Why a contextual-interactional rather than an individualistic model? First of all, providing enrichment to individual children in organized preschool settings is an expensive model of early education. Preschools and kindergartens will probably have low priority for sometime to come in the educational policies of many developing countries that have not yet achieved universal primary schooling. Secondly, if the child is provided with intellectual enrichment only in the preschool, but his home environment remains the same, the gains obtained from the preschool may disappear after the completion of the program. This is because the child would be left back to rely on his own limited resources, without environmental support. In contrast, if the child's home environment and significant others are changed through intervention, they would continue supporting the child's development, and thus the cognitive gains would be sustained after the completion of the program. Finally, intervention attempts in developing countries need to be especially sensitive to the interdependent human relations - 'the culture of relatedness' (Kağıtçıbaşı,1990) prevalent in these societies. In socio-cultural contexts where close-knit family, kinship and community ties exist, it is important to build on these ties as support mechanisms.

Indeed research on early enrichment supports the contextual model (Bronfenbrenner, 1979; Smilansky, 1979; Lombard, 1981; Myers, 1992). Research also supports a 'whole child' approach, integrating socio-emotional and cognitive development, rather than a purely cognitive approach because if cognitive development is not supported by the induction of corresponding growth of the child's self-confidence, autonomy and initiative, again it may not be self-sustaining (Smilansky, 1979; Kağıtçıbaşı, 1991).

2 The Turkish Early Enrichment Project

The ten-year longitudinal study of early enrichment and its follow-up in to adolescence can serve as a case study of how theoretically informed applied research in psychology can have social relevance and can impact policy. This is the Turkish Early Enrichment Project in which I have been involved over the past ten years with my colleagues Sevda Bekman & Diane Sunar. The original research was a four-year (1982-86) longitudinal study of early childhood enrichment and mother training in the low income areas of Istan-

bul.[6] I will briefly summarize here only some aspects of this extensive study. More detailed accounts are provided, for example by Kağıtçıbaşı, Sunar & Bekman (1988) and Kağıtçıbaşı (1991).
The study was conducted in low-income areas of Istanbul. The majority (2/3) of the sample consisted of semi-skilled or unskilled factory workers; 1/3 were non-working women. Most of the sample of mothers (and also fathers) were of rural origin. Work places employing 300 or more women workers are required by law to run day care centers for their children. These child care centers were the starting point of our purposive sampling. Three and five years-old children from six day care centers were selected. Three of these centers provided pre-school education and three provided only custodial care. This difference between the orientations of the centers was an important variable in the study. However, it will not be dealt with in this chapter, given the space limitations and the main focus of the chapter on the project intervention, i.e. mother training. Another group of children not attending day care centers were selected from the neighborhoods in which the day care children lived. All the children were matched for age and socio-economic-standing of their families. The mothers of the children selected for the study constituted the mothers' sample. The sample was originally drawn to include 280 mother-child pairs. During the first two years, the number was reduced to 225 through attrition. Most attrition occurred in the first year. A main factor for this was the inability of some mothers at the very start (e.g. illiteracy, ill health, etc.) or their unwillingness (e.g. due to husbands' or mother-in-laws' objections) to participate in the project.

In the first year of the study extensive assessments were carried out of the three and five year old children's level of overall development (cognitive, social-emotional) based on direct testing and observations of their behavior and interviews with their mothers. Additionally, mothers' child rearing orientations, life styles, world views and self-concepts were assessed as well as the home environment, through observations and interviews. Baselines were thus established.

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[6] The Project was funded by the International Development Research Centre. Extensive coverage of the results is provided in Kağıtçıbaşı, Ç., Sunar, D. & Bekman, S. (1988) and a summary version in Kağıtçıbaşı, Ç. (1991). The follow-up study is also conducted jointly with S. Bekman & D. Sunar. It is funded by the Population Council (ME Awards Program).

In the second and third years of the project, home-based intervention (mother training) was carried out with a randomly selected sample of the mothers. Random selection was considered of crucial importance. However the fact that some people got intervention but others did not was at times a source of misunderstanding and resentment. It took much explanation and clarification on the part of the research team to solve such problems (see Kağıtçıbaşı, 1991, reprinted). The experimental (trained) group consisted of 100 mothers at the beginning of the second year. This number dropped to 90 by the end of the intervention (with a low attrition rate of 1/10 th). 155 mothers were in the control (non-trained) group.
In the fourth year, reassessments were carried out to establish both pre-post and experimental (trained)-control (non-trained) group differences. Almost all of the assessments used in the first year were repeated in the fourth year. Additionally, extensive school-related assessment was used in the fourth year, such as school achievement and attitudes toward school (see Kağıtçıbaşı, Sunar & Bekman, 1988; Kağıtçıbaşı, 1991).

The intervention program, comprising of mother training, had two components: 'cognitive training' and 'mother enrichment.' The cognitive training was the HIPPY program (Home Instruction Program for Preschool Youngsters), developed by Lombard (1981) in Israel. A short description of HIPPY is given by Eldering and Vedder (in this volume). (More recently this has been replaced by a program we developed, ourselves). Through a network of paraprofessional field workers, the cognitive materials were administered to the mothers at home or in group settings, in alternate weeks, who then administered them to their own children. In this way the mothers assumed the trainer role with their children.

The mother enrichment program was conducted in group discussions. The topics covered in the first year were: The importance of early years and the role of the mother; child development (0-6); social development; toilet training and sex education; children's questions; nutrition; health and child care; importance of children's games; and creative play activities. In the second year the following topics were covered: Mother-child interaction; types of negative discipline; types of positive discipline; modifying negative behaviors; accepting the child's behavior; listening to the child; mother expressing herself (I-messages); generalization (transfer) of principles learned to other interpersonal relations; study habits; woman's needs.

Empowerment of the mothers in coping with problems and attending to their children's needs as well as their own needs was aimed for. A special effort was made to render the program culturally sensitive. For example the close knit family ties and the relatedness values were reinforced, but a new element, 'autonomy,' was also introduced in child rearing. The fact that the program was original, rather than imported from abroad was an asset in rendering it culturally sensitive.

The intervention lasted a 60-week period (30 weeks each year). Group discussions were held biweekly. In the group usually one hour was spent on HIPPY, and one to one and a half hours was spent on the Mother Enrichment Program. All the mothers were expected to attend all the group meetings; absenteeism was quite low.

3 The Fourth Year Results

The fourth year results pertaining to the project intervention, i.e. mother training, are remarkable in showing very positive effects on children's overall development and school achievement. In most of the measures used, the children whose mothers had training surpassed the control group of children (Kağıtçıbaşı, Sunar & Bekman 1988; Kağıtçıbaşı, 1991). It thus appears that, working only with the mothers and the mothers working with their children goes a long way toward contributing to children's development. Specifically, significant differences were obtained as predicted, between the trained and control groups of children in cognitive tasks, measured by the Stanford-Binet, the Analytical Triad and Block Design of WIPSY; Piaget tests, achievement tests and school records. As for socio-emotional development, the children whose mothers were trained demonstrated less aggressive and more autonomous behavior as well as better emotional state (Kağıtçıbaşı, Sunar & Bekman, 1988; Kağıtçıbaşı, 1991).

Comparing these results with the results of the application of HIPPY in the Netherlands, evaluated after two years shows greater gains in Turkey (Vedder & Eldering, 1992). This is probably because of some significant differences in program implementation in the two countries. (see Eldering

& Vedder in this volume). The most obvious and important difference is the use of HIPPY by itself in the Netherlands but in conjunction with the 'Mother Enrichment Program' in Turkey. The latter program, utilizing participatory learning techniques with the help of 'group dynamics,' was found to be very effective in changing the mothers and the children's environment. Thus, it had direct positive effects on children. Indeed almost all the findings referring to children's *social* development, improvement in women's intrafamily status, their parenting styles and family relations, both in the fourth year post-test and in the follow-up study, below, provide evidence mainly for the impact of the Mother Enrichment Program. The group discussion settings also proved to be a satisfying social experience which helped increase mothers' motivation to continue in the program, and thus the drop-out rate was negligible. This was much higher in the Netherlands. Even though in the Dutch program there were group meetings, also, these were mainly held for the application of HIPPY. Additionally, in the Dutch application mothers' intensity of participation in terms of the number of completed week-tasks varied greatly. The Dutch evaluation study (Vedder & Eldering, 1992) included the mothers whose participation was quite low, also. In the Turkish application, however, intensity of participation at the group meetings was high throughout the program. These are important differences which probably account for the different outcomes.

The 'Mother Enrichment Program,' was an empowerment program, which enabled mothers to be more skillful in communicating with their children and with other people (especially their husbands), in expressing their feelings better and in understanding their children. Indeed the 'mother enrichment' component best reflects the basic contextual-interactional orientation of the project. In terms of mothers' interactive styles with their children, the fourth year findings show greater satisfaction, higher responsiveness, higher level of verbalization, and supportive interaction, higher educational aspirations and expectations for children, as well as better acceptance of children's autonomy (Kağıtçıbaşı & Bekman, 1988; Kağıtçıbaşı, 1991). These orientations were assessed through interviews with mothers and observations of mother-child interactions on the structured Hess & Shipman, task (Shipman, Barone, Beaton, Emmerich & Ward, 1977). For example, responsiveness was measured in recording the frequency of such acts while the mother was teaching a new task to the child, as well as in interviews, using hypothetical situations. The finding about autonomy is important because the first year (pretest) results had shown that autonomy was not valued by the mothers. After the training, the trained mothers came to appreciate their children's autonomy while remaining as close to them as the control group of mothers - possibly reflecting an environment, promoting something of a synthesis between the 'relational self' and the 'individuated self.' This is in line with a model of family change which I have developed, and I believe reflects the typical family change patterns in the developing countries (Kağıtçıbaşı, 1990).

Finally, apart from effects on mothers interactions with their children, there were also direct effects on the trained mothers, themselves. Specifically, their intrafamily status vis a vis their husbands became higher than that of the control group. They also manifested a more positive outlook on life. These findings show clearly the empowering effects of the 'Mother Enrichment Program.' It appears that this intervention focussing on the mothers, helped contribute to the well being of the children by promoting the well being of the mothers. The intersecting needs of mothers and children appear to have been met by the intervention program.

4 The Follow-Up Study

Even though these findings are impressive, a real test of the impact of intervention lies in long-term evaluation which is possible only by means of follow-up studies. This is because the immediate gains from an enrichment program may dissipate over time, as was found to be the case with some intervention projects (e.g. Smilansky, 1979). As I indicated before, the subsequent leveling of early gains from intervention programs appear to be due at least partially to two common characteristics of these programs: a) focusing on cognitive skills exclusively and b) focusing on the individual child, abstracting him from his environment. Since our Project did not share these characteristics but rather used a contextual approach to the 'whole child,' our expectation was for sustained impact. Nevertheless, only empirical follow-up research could demonstrate it.

Long term longitudinal study of early childhood programs is rare. In developing countries it is non-existent. This is because such research is difficult and time consuming by definition. A rare example is the Perry Preschool Project, conducted by the High/Scope Educational Foundation in Ypsilanti, Michigan, in the United States (Schweinhart & Weikart, 1980;

Berrueta-Clement, Schweinhart, Barnett, Epstein & Weikart, 1984), where children who participated in a preschool program were followed through the primary school, adolescence, into young adulthood. One of the most remarkable findings of that series of studies is the positive impact of early enrichment on motivational factors (such as commitment to school and valuing education) and on social adjustment to institutions (school, family, the law), rather than on cognitive capacity (I.Q). Commitment to schooling, and school achievement mediated between early enrichment and later well-being during adolescence. This is an important finding which points to a chain of interrelated effects deriving from early enrichment and developing into a positive cycle.

There was some indication already from the fourth year assessments (post-testing) of the Turkish Early Enrichment Project that such a positive cycle, in fact, started after the children started primary school, as mentioned before. It was evidenced from better school adjustment, and higher school achievement of the group of children whose mothers had been trained. It was also evidenced from the trained mothers' expression of greater satisfaction with their children, their higher expectations of school success, and both higher aspirations and expectations of more years of schooling for their children. In addition to the above school-related behaviors and orientations, the trained mother's interaction styles with and general orientation to their children were also conducive to overall success and well-being of the child.

To test the long term effects of the project intervention and to determine if these initial gains found a year after the intervention were sustained, we have undertaken a follow-up study ten years after the start of the original study and seven years after the end of the intervention. The aim of the follow up study was to assess the overall condition of the original children, now adolescents, and of their mothers and to relate this to the original intervention using a causal model.

A major task of the follow-up study was tracing the original families, which is difficult after so many years, especially for low-income groups who move a lot with job shifts, unemployment, etc. Out of the original 255 families we were able to reach 225 (with a record low attrition rate of 10%). In-depth interviews were conducted individually with the adolescents, (aged 13-15), mothers and fathers. They provided a wealth of information about the adolescents, mothers and family relations. Additionally, extensive school records were obtained for the adolescents. They were also given the vocabulary subtest of the Turkish standardization of the WISC-R.[7] I will summarize here only the main findings.

In a social context where compulsory schooling is only five years, (as was the case at the time of this study), probably the most important indicator of a positive orientation to education in low income areas is 'being in school.' This is because given the economic pressures, especially the children who do not do well in school and those who are not highly motivated, get out at about the age of 11, upon the completion of the compulsory primary school. On this crucial indicator of educational attainment, a significant difference was obtained between the children whose mothers had been trained in the original study and those whose mothers had not been trained (for HIPPY and empowered) with 86% of the former but only 67% of the latter being still in school (p=. 002) (Table 1). This is a finding, which in itself, as an objective outcome measure, speaks for the policy implication of our contextual model of early enrichment.

Primary school academic performance is the second objective academic indicator on which significant differences obtained between the experimental (mother-trained) and control groups. Based on report card grades over five years of primary school, the mother-trained children surpassed the control group on Turkish, mathematics and overall academic average (Table 1).

This finding also provides clear evidence for the value of the intervention model utilized. It shows that the gains obtained from the intervention were not short lived. Five years of better school performance must have contributed to the higher level of school attainment of the experimental group. It signifies a better school experience in the beginning which paves the way for higher educational achievement and more years of schooling.

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[7] A vocabularly measure was chosen because research on human abilities in this part of the world (reviewed by Kağıtçıbaşı and Savasir, 1988) has pointed to the greater disadvantage of lower SES subjects on performance tests in general and the higher variance explained by the verbal factor of the WISCR, as evidenced by research from Greece, Israel and Turkey. The Turkish standardization of WISC-R had been done with urban low SES norms, which fits with our sample. It also has high reliability and discriminating power.

The difference between the academic performances of the two groups is not significant after primary school. This is largely due to the self-selection factor in the control group, where the less successful students drop out after primary school, and the better ones continue in school.

Table 1: Adolescent's Academic Performance

	Trained N=83		Non-trained			
Primary School GPAs	Mean	SD	Mean	SD	t	p
Turkish	8.85	1.36	8.18	1.41	3.08	.001
Mathematics	8.15	1.75	7.32	1.75	3.01	.001
Overall Academic	8.56	1.45	7.89	1.53	2.82	.002
Cognitive Performance						
Standardazed WISC-R Vocabulary Score	45.62	10.23	41.92	13.39	F:2.1	.032
Schooling	%	f	%	f	χ^2	p
Is adolescent still in school?	86	73	67	88		
Yes	13	11	32	43	9.57	.002
No						

Finally, the standardized WISC-R vocabulary scores, as an indicator of cognitive performance, showed a significant difference between the two groups where the mother-trained group surpassed the control group (Table 1). This is another important finding, especially in view of previous research (Kağıtçıbaşı & Savasir, 1988; Bernstein, 1975) indicating smaller vocabulary among children from lower socio-economic levels, compared with middle class children. These results point to the fact that early enrichment, if successful, can have long term effects. These sustained gains show that the adverse effects of low SES living conditions have been counteracted for the experimental group whose immediate environment was changed through the project intervention.

The effects of intervention are also visible in adolescents' self esteem, academic orientation and social integration (Table 2).

Table 2: Adolescent's Academic Orientation

	Trained N=83		Non-trained N=134			
Child Variables	Mean	SD	Mean	SD	t	p
Could she/he be best in class if she/he studied hard	4.58	.64	4.38	.81	1.98	.025
Having nothing better to do as a reason for going to school	1.63	1.01	1.99	1.22	-2.22	.015
Parent's wishes as a reason for going to school	2.39	1.31	2.87	1.46	-2.45	.01
How pleased she/he is with his/her school success	3.64	.86	3.41	.92	1.83	.035
How pleased teachers are with his/her school success	3.63	.74	3.44	.86	1.79	.04
How much preschool preparation helped	4.41	.68	4.15	.95	2.07	.02
How long preschool preparation helped	5.23	1.90	4.31	2.12	3.01	.001
Was she/he prepared when starting school	%	f	%	f	χ^2	p
Yes	97	82	22	30		
No	2	2	77	103	150.4	.000

Thus the mother-trained adolescents compared with control group, were more pleased with their school success and thought that their teachers were pleased with them, too; they also felt that they could be the best in class if they studied hard. Negative or external pressure reasons for going to school (having nothing better to do or parents' wishes) were endorsed more by the control group. Thus, positive orientation to education and self esteem are concomitant with good academic performance. The experimental group felt that they were prepared when they started school; that this preparation helped and for a longer period, compared with the control group. Thus in retrospect, the intervention was perceived as helpful by the adolescents who were not its direct targets but non-direct beneficiaries through mother training.

The experimental group also surpassed the control group in autonomy, as reflected in making their own decisions, and better social integration, in terms of their ideas being accepted by friends and in terms of mothers' approval of children's friends. Trouble with the law is rare among these adolescents, most of whom have intact families, nevertheless the few (6%) who had such a problem were all from the control group (Table 3).

Finally, the adolescents' retrospective perception of their mothers gives clear evidence of what our 'Mother Enrichment' program accomplished (Table 4).

The adolescents whose mothers had been trained perceived them to be more nurturant and more responsive than the control group. Specifically, the former group perceived their mothers to talk with them, to console them, to be interested in them more, and to spank them less than the latter. Obviously, the trained mothers manifested a different style of parenting. This was probably the key difference between the human environments of the two groups of children.

Table 3: Adolescent's Social Integration and Autonomy

	Trained N=83		Non-trained N = 134			
Child Variables	Mean	SD	Mean	SD	t	p
Are his/her ideas accepted by friends	3.74	.64	3.54	.71	2.06	.02
Child makes decisions on his/her own	3.54	.83	3.32	.96	1.73	.045
Did she/he ever have trouble with the police	%	f	%	f	χ^2	p
Yes	0	0	6	8		
No	100	84	94	125	3.69	.05
Mother Variables						
What mother thinks of his/her friends	%	f	%	f	χ^2	p
Approve highly	55	46	38	51		
Approve somewhat	31	26	33	45		
Not sure	03	7	12	28		
Does not approve	05	4	07	10	9.02	.03

There is also much evidence obtained from the mother and father interviews which further substantiate the findings from the adolescents. They strongly imply that the changes in the mothers, meant changes in family emotional atmosphere and family relations, with corresponding changes in children which I have already described. Significant differences between the two groups emerged in many basic family variables, parent-child interaction and perception of children by the parents. Thus in the experimental group better parent-child communication, better adjustment of the child in the family, less physical punishment, and in general closer and better family relations were reported by both mothers and fathers.

Table 4: Adolescent's Perception of Mother

	Trained N=83		Non-trained N=134			
Variables	Mean	SD	Mean	SD	t	p
Mother liked to talk with him/her when little	3.89	.96	3.61	1.06	1.99	.025
Mother used to spank him/her when little	2.00	.96	2.32	1.07	-2.25	.015
Mother used to console him/her when little	4.26	.82	3.93	1.00	2.52	.005
Mother used to appreciate him/her when little	3.94	.84	3.69	.89	1.99	.025
Mother was interested in what she/he did	4.22	.87	4.00	.90	1.75	.040
Mother used to help him/her when little	4.20	.79	4.00	.91	1.69	.045

Furthermore, trained mothers still enjoyed higher status (vis a vis their husbands) in the family. The parents in the experimental group also manifested higher educational expectations for their children, were more interested in what is going on in school and provided the child more help with home work and better environmental stimulation in general, all of these findings, which are statistically significant, attest to the existence of a more supportive and more stimulating home environment - a different family culture in the families of the trained mothers.

Programs like this, which have a holistic-contextual approach to early childhood development and education, constitute a viable alternative to formal preschool education in developing countries which target the individual child. Their strengths lie in being community based, parent-family oriented interactive learning experiences which promote the child's overall optimal development-in-context. Being cost-effective, they have the potential for wide-scale application, and being communitybased, they have the inherent flexibility to benefit from the indigenous culture and to become culturally relevant.

5 Conclusion

This longitudinal study is an example of a theoretically informed applied research that has important policy implications. Those implications have in, fact, materialized as public service. The mother training program is now in actual use in a number of urban shanty town areas as well as rural villages in Turkey through the adult education centers of the Ministry of Education. In 1992-93 more than 1200 mothers were trained. The program is now condensed to one year (from two years), since our new 'Cognitive Training Program' is being used, instead of HIPPY. It is applied in the year just prior to school entry (at 5 years of age). The program applications are supported by UNICEF and a private foundation in Turkey, Mother-Child Education Foundation. The 'mother enrichment' component of the program has been adapted to television; it is also being used in the Netherlands with ethnic minorities (in the OPSTAPJE program of the Averroes Foundation). The applications are expanding, and evaluative research is being conducted in conjunction with new applications. For example, two recent studies, one with children, the other with mothers, have found positive outcomes of the current program. Thus, the applications are going to scale and promise to have an impact on societal development.

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SUCCESS FOR ALL: PREVENTION AND EARLY INTERVENTION IN ELEMENTARY SCHOOLS

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1 Introduction

Every September, three million six-year-olds enter US kindergartens. Every one of them is absolutely confident that he or she is going to do well in school. Every one of them is smart and knows it. Every one is highly motivated, eager to learn.

Just two years later, many of these bright, enthusiastic children have learned a hard lesson. Many have failed first grade; in some urban districts, as many as 20% of first graders are retained each year. Others barely pass, but are beginning to see that they are not making it. In particular, some students know that they are not reading as well as their classmates. As they proceed through the elementary grades, many students begin to see that they are failing at their full-time jobs. When this happens, things begin to unravel. Failing students begin to have poor motivation and poor self-expectations, which lead to continued poor achievement, in a declining spiral that ultimately leads to despair, delinquency, and dropout.

Remediating learning deficits after they are already well established is extremely difficult. Children who have already failed to learn to read, for example, are now anxious about reading, interfering with their ability to focus on it. Their motivation to read may be low (Covington & Omelich, 1988). Clearly, the time to provide additional help to children who are at risk is early, when children are still motivated and confident and when any learning deficits are relatively small and remediable. The most important goal in educational programming for students at risk of school failure is to try to make certain that we do not squander the greatest resource we have: the enthusiasm and positive self-expectations of young children themselves.

In practical terms, what this perspective implies is that services for at-risk children must be shifted from an emphasis on remediation to an emphasis on prevention and early intervention. Prevention means providing developmentally appropriate preschool and kindergarten programs so that students will enter first grade ready to succeed, and it means providing regular classroom teachers with effective instructional programs, curricula, and staff development to enable them to see that most students are successful the first time they are taught. Early intervention means that supplementary instructional services are provided early in students' schooling and that they are intensive enough to bring at-risk students quickly to a level at which they can profit from good quality classroom instruction.

In this chapter, we describe the nature and outcomes of a program designed around this vision, a program that emphasizes prevention and early, intensive intervention to see that all children in schools serving disadvantaged students are successful in basic skills the first time they are taught, and that they can build on that success throughout the elementary years.

The name of this program is Success for All. The idea behind Success for All is to use everything we know about effective instruction for students at risk to direct all aspects of school and classroom organization toward the goal of preventing academic deficits from appearing in the first place; recognizing and intensively intervening with any deficits that do appear; and providing students with a rich and full curriculum to enable them to build on their firm foundation in basic skills. The commitment of Success for All is to do whatever it takes to see that every child makes it through third grade at or near grade level in reading and other basic skills, and then goes beyond this in the later grades.

Success for All is currently being implemented in a total of 70 schools in 29 districts in 16 US states. Almost all are among the most disadvantaged and lowest-achieving schools in their respective districts; most qualify as Chapter 1 schoolwide projects, which means that at least 75% of students are in poverty. Most serve student bodies that are almost 100% African American, although many are integrated and increasing numbers contain many students of Latino or Southeast Asian background who often have limited English proficiency. The schools are located in all parts of the US, and are located in rural as well as urban settings. The main elements of Success for All are described in the following section (adapted from Slavin, Madden, Karweit, Dolan & Wasik, 1992).

2 Success for All program elements

Prekindergarten and Kindergarten

The goal of the prekindergarten and kindergarten programs in Success for All is to provide an experiential and child-centered curriculum that will give children a needed foundation for success in the elementary school. The curriculum underscores the importance of a balance between child-initiated and teacher-directed instruction. It uses integrated, thematic units and focuses on the integration of language and communication areas. The curriculum also encourages the acquisition of skills such as using elaborated, descriptive language, recognizing and producing the alphabet, understanding the conventions of print, and understanding the communicative function of language.

Thematic units are emphasized in prekindergarten and kindergarten. These are curricula built around important themes that integrate reading, pre-writing, math, social studies, science, art, music, games, and drama. Examples of thematic units include My Class/My School, My Family/My Home, Community Helpers, African American History, Transportation, and Tools and Machines.

Children's literature and stories are read daily in Success for All prekindergarten and kindergarten classrooms in a program called Story Telling and Retelling, or STaR (Karweit & Coleman, 1991). Children's stories are an important avenue for expanding children's experience and knowledge. On the most basic level, stories provide opportunities for exposure to the communicative function of language and the hands-on experience of seeing how print works. In discussing and retelling stories, children begin to learn that narratives have predictable elements (characters, setting, problems, and solutions), and this knowledge helps with reading comprehension later on. At another level, stories provide models and metaphors for the child's developing communication abilities.

Explicit teaching of letter recognition is a part of the preschool and kindergarten curriculum as well. Starting with the alphabet song, which most children can easily learn or already know, the program proceeds through the alphabet one letter each week. Alphabet Big Books that feature a 'letter of the week' are provided. In addition, there is a weekly cycle for letter recognition and review. Teachers are encouraged to give an alphabet recognition test at the beginning of the year and at regular intervals (every eight weeks) to provide an on-going alphabet 'census' for their classroom.

The Peabody Language Development Kit is also used in Success for All classrooms, to provide additional models for language use and expression, as well as development of specific vocabulary skills. It contains lessons on such concepts as shapes, colors, classification, neighborhoods, foods, and clothing, and such language concepts as over/under and before/after.

Mathematics activities are incorporated into the thematic units. For example, in the unit about 'Special Me,' counting activities reveal the number of boys and girls in the classroom, and measuring activities find the height of each child. In addition, suggested lesson guides to accompany the math textbook, *Explorations*, are provided as a part of the Success for All curriculum.

Reading Program

The main curricular focus of Success for All is on reading. The reason for this is that in US schools, school success is virtually synonymous with reading success in the early grades. For example, more than 90% of students assigned to special education for learning disabilities are assigned due to reading difficulties (Norman & Zigmond, 1980), and almost all retentions in grade are due to reading failure.

Students in grades 1-3 are regrouped for reading. The students are assigned to heterogeneous, age-grouped classes with class sizes of about 25 most of the day, but during a regular 90-minute reading period they are regrouped by reading performance levels into reading classes of 15-20 students all at the same level. For example, a second grade-level reading class might contain first, second, and third grade students all reading at the same level.

Regrouping allows teachers to teach the whole reading class without having to break the class into reading groups. This greatly reduces the time spent in seatwork and increases direct instruction time, eliminating workbooks, dittos, or other follow-up activities which are needed in classes that have multiple reading groups. The regrouping is a form of the Joplin Plan, which has been found to increase reading achievement in the elementary grades (Slavin, 1987a).

Reading teachers at every grade level begin the reading time by reading children's literature to students and engaging them in a discussion of the story to enhance their understanding of the story, listening and speaking vocabulary, and knowledge of story structure. In kindergarten and first grade, the program emphasizes development of basic language skills with the use of Story Telling and Retelling (STaR), which involves the students in listening to, retelling, and dramatizing children's literature (Karweit, 1988). Big books as well as oral and written composing activities allow students to develop concepts of print as they also develop knowledge of story structure. Peabody Language Development Kits are used to further develop receptive and expressive language.

Beginning Reading is introduced in the second semester of kindergarten or in first grade, depending on district policies. In this program, letters and sounds are introduced in an active, engaging series of activities that begins with oral language and moves into written symbols. Once letter sounds are taught, they are reinforced by the reading of stories which use the sounds. The K-1 reading program uses a series of 'shared stories', minibooks that contain text written in small type and read by the teacher and text written in large type and read by the students. The student portion uses a phonetically controlled vocabulary. In this way students can learn strategies for word attack in the context of meaningful, engaging stories. The program emphasizes repeated oral reading to partners as well as to the teacher, instruction in story structure and specific comprehension skills, and integration of reading and writing.

When students reach the primer reading level, they use a form of Cooperative Integrated Reading and Composition (CIRC; Stevens, Madden, Slavin, & Farnish, 1987) with novels or basal series. CIRC uses cooperative learning activities built around story structure, prediction, summarization, vocabulary building, decoding practice, and story-related writing. Students engage in partner reading and structured discussion of the novels or stories, and work toward mastery of the vocabulary and content of the story in teams. Story-related writing is also shared within teams. A writing program based on a writing process model with peer response groups is also used.

In addition to these story-related activities, teachers provide direct instruction in reading comprehension skills, and students practice these skills in their teams. Classroom libraries of trade books at students' reading levels are provided for each teacher, and students read books of their choice for homework for 20 minutes each night. Home readings are shared via presentations, summaries, puppet shows, and other formats twice a week during 'book club' sessions. Research on CIRC has found it to significantly increase students' reading comprehension and language skills (Stevens et al., 1987).

In schools with Spanish bilingual programs, a Spanish version of the Success for All reading program is used until students are ready to transition into English (usually in third grade).

Reading Tutors

One of the most important elements of the Success for All model is the use of tutors to promote students' success in reading. One-to-one tutoring is the most effective form of instruction known (Slavin, Karweit & Madden, 1989; Wasik & Slavin, 1993). The tutors are certified teachers with experience teaching Chapter 1, special education, and/or primary reading. They receive special training in the reading program and in tutoring methods. In schools with many limited English proficient students some of the tutors may be teachers of English as a second language. Tutors work one-on-one with students who are having difficulties keeping up with their reading groups. The tutoring occurs in 20-minute sessions taken from an hour-long social studies period. In general, tutors support students' success in the regular reading curriculum, rather than teaching different objectives. For example, if the regular reading teacher is working on a story emphasizing long vowel words, so does the tutor. However, tutors seek to identify learning problems and use different strategies to teach the same skills and teach metacognitive skills beyond those taught in the classroom program (Wasik & Madden, 1989).

During daily 90-minute reading periods, tutors serve as additional reading teachers to reduce class size for reading to about 15 in high-resource schools and about 20 in moderate- and low-resource schools (because they have fewer tutors to reduce class size). Reading teachers and tutors use brief forms to communicate about students' specific problems and needs and meet at regular times to coordinate their approaches with individual children.

Initial decisions about reading group placement and the need for tutoring are based on informal reading inventories that the tutors give to each child. Subsequent reading group placements and tutoring assignments are made based on curriculum-based assessments given every eight weeks, which include teacher judgments as well as more formal assessments. First graders receive priority for tutoring, on the assumption that the primary function of the tutors is to help all students be successful in reading the first time, before they fail and become remedial readers.

Eight-Week Reading Assessments

At eight week intervals, reading teachers assess student progress through the reading program. The results of the assessments are used to determine who is to receive tutoring, to change students' reading groups, to suggest other adaptations in students' programs, and to identify students who need other types of assistance, such as family interventions or screening for vision and hearing problems.

Family Support Team

One of the basic tenets of the Success for All philosophy is that parents are an essential part of the formula for success. A family support team works in each school, serving to make families feel comfortable in the school as well as providing specific services. In the high-resource schools, social workers, attendance monitors, and other staff are added to the school's usual staff. In moderate- and low-resource schools, the family support team consists of the Chapter 1 parent liaison, vice-principal (if any), counselor (if any), facilitator, and any other appropriate staff already present in the school. The family support team works to involve parents in support of their children's success in school. It contacts parents whose children are frequently absent to see what resources can be provided to assist the family in getting their child to school. Parenting education is provided for interested families . Family support staff, teachers and parents work together to solve school behavior problems. Also, family support staff are called on to provide assistance when students seem to be working at less than their full potential because of problems at home. Families of students who are not receiving adequate sleep or nutrition, need glasses, are not attending school regularly, or are exhibiting serious behavior problems, receive family support assistance. The family support team is strongly integrated into the academic program of the school. It receives referrals from teachers and tutors regarding children who are not making adequate academic progress, and thereby constitutes an additional stage of intervention for students in need above and beyond that provided by the classroom teacher or tutor. The family support team also encourages and trains the parents to fulfill numerous volunteer roles within the school, ranging from providing a listening ear to emerging readers to helping in the school cafeteria.

Program Facilitator

A program facilitator works at each school to oversee (with the principal) the operation of the Success for All model. High-resource schools have a full-time facilitator while moderate- and low-resource schools have half-time facilitators. The facilitator helps plan the Success for All program, helps the principal with scheduling, and visits classes and tutoring sessions frequently to help teachers and tutors with individual problems. He or she works directly with the teachers on implementation of the curriculum, classroom management, and other issues, helps teachers and tutors deal with any behavior problems or other special problems, and coordinates the activities of the family support team with those of the instructional staff.

Teachers and Teacher Training

The teachers and tutors are regular certified teachers. They receive detailed teacher's manuals supplemented by two days of inservice training at the beginning of the school year. For teachers of grades 1-3 and for reading tutors, these training sessions focus on implementation of the reading program, and their detailed teachers' manuals cover general teaching strategies as well as specific lessons. Preschool and kindergarten teachers and aides are trained in use of the STaR and Peabody programs, thematic units, and other aspects of the preschool and kindergarten models. Tutors later receive an additional day of training on tutoring strategies and reading assessment.

Throughout the year, additional inservice presentations are made by the facilitators and other project staff on such topics as classroom management, instructional pace, and cooperative learning. Facilitators also organize many informal sessions to allow teachers to share problems and problem solutions, suggest changes, and discuss individual children. The staff development model used in Success for All emphasizes relatively brief initial training with extensive classroom follow-up, coaching, and group discussion.

Special Education

Every effort is made to deal with students' learning problems within the context of the regular classroom, as supplemented by tutors. Tutors evaluate students' strengths and weaknesses and develop strategies to teach in the most effective way. In some schools, special education teachers work as tutors and reading teachers with students identified as learning disabled as well as other students experiencing learning problems.

Advisory Committee

An advisory committee composed of the building principal, program facilitator, teacher representatives, and family support staff meets regularly to review the progress of the program and to identify and solve any problems that arise.

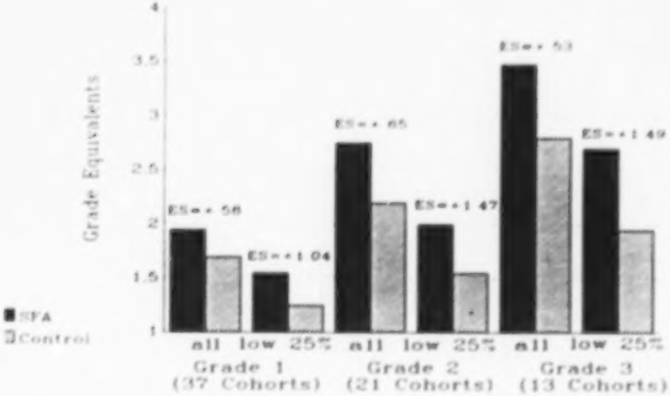
3 Evaluation

Fifteen of the Success for All schools in seven states have been rigorously assessed. Each was matched with a comparison school that was similar in the percent of students in poverty, average achievement level, ethnicity, and other factors. Within each matched pair of schools, students are individually matched on the earliest test scores available.

Each spring, students are given individually administered tests. The tests are the Durrell Oral Reading Test (Durrell & Catterson, 1980), and the Woodcock Passage Comprehension, Word Identification and Word Attack scales (Woodcock, 1984).

Reading performance outcomes are summarized in Figure 1. The Figure presents mean grade equivalents for all students who have been in Success for All and control schools since first grade or earlier. Each cohort of students is counted as a separate replication; for example, 37 cohorts of first graders (in 15 schools) have experienced the program. 'Effect sizes' above each bar represent the proportion of a standard deviation separating Success for All and control students. In essence, the effect sizes represent a meta-analysis of findings from separate experimental-control comparisons for each of the fifteen Success for All schools (for details of the procedures and findings for all schools, see Slavin, Madden, Dolan, Wasik, Ross & Smith, in press; Slavin & Madden, 1993).

Figure 1: **Cumulative Mean Reading Grade Equivalents and Effect Sizes in Success for All Schools, 1988-1993**



Includes all students in Success for All or control schools since first grade (N=15 school pairs). Schools are in Baltimore, Philadelphia, Charleston (SC), Memphis, Ft. Wayne (IN), Caldwell (ID), and Montgomery (AL).

Figure 1 shows that on average Success for All students are far outperforming matched control students on individually administered tests of reading. The overall effect sizes of +.58 in first grade, +.65 in second, and +.53 in third grade are all substantial. In grade-equivalent terms, the experimental-control difference rises from three months in first grade to five months in second and seven months in third grade.[8] As a point of contrast, the effects of reducing class size from 25 to 15 for four years (grades K-3) were found in a Tennessee study to average about +.25 (Word et al., 1990), and other studies of this level of class size reduction have found even smaller effects. More important, however, is the effect on the lowest-achieving quarter of each class. This effect size rises from +1.04 in first grade to +1.47 in second to +1.49 in third.

The Importance of Early Intervention

The findings of the Success for All evaluations indicate that focusing on prevention and early intervention can significantly increase the reading performance of disadvantaged and at-risk students, as well as reducing retentions and special education placements. In particular, the program substantially increases the achievement of those students who are most at-risk. Not every Success for All third grader who has been in the program since first grade is reading at grade level, but virtually every one is reading close enough to grade level to profit from good classroom instruction without a continuing need for remedial or special education.

One interesting finding in research on Success for All is that the program's effects are much less for students who begin in it past the first grade than for those who begin in preschool, kindergarten, or first grade. Success for All always begins in grades K-3 or pre-K to 3. A typical pattern is for program effects to be large in first grade the first year, in first and second grades the second year, and in first, second, and third grades the third year of implementation (Madden, Slavin, Karweit, Dolan & Wasik, 1991). This finding points up the importance of prevention and early intervention. A second or third grader who is already far behind in basic skills may not profit as much from improvements in regular classroom instruction or even from remedial tutoring. In contrast, students who end first grade with a solid foundation of success in reading can profit from enhanced classroom instruction and continue to build on this foundation. What this implies is that *both* early intervention *and* improvement in classroom practice are needed. Early intervention alone is not enough. For example, Reading Recovery (Pinnell, 1989) provides one-to-one tutoring to first graders but does not change regular classroom instruction. Longitudinal studies of this approach have found that gains made in first grade are maintained but do not grow over time. At the same time, improvement in classroom practice may not be enough in itself for students who are already experiencing difficulties, as we are finding in our Success for All research. What is needed is a strategy of preventing learning problems from appearing in the first place and then improving classroom instruction throughout the grades to fan the flame of learning ignited in preschool, kindergarten, and first grade (see Slavin, Karweit & Wasik, 1992/93, 1994).

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[8] The fact that effect sizes did not rise over the three year period does not indicate a static effect; effect sizes only remain stable because standard deviations rise each year.

Improving Outcomes Over Time

An analysis of reading data from successive cohorts of students over time shows that the effects of Success for All are improving each year (Slavin et al., in press). For example, first graders in the first year of program implementation exceeded matched control students by 34% of a standard deviation. First graders in the second year of implementation exceeded their controls by 57% of a standard deviation. This pattern continues for first graders and is equally apparent for second and third graders.

There are two likely interpretations of this trend. First, teachers and schools are getting better at program implementation each year. Fullan (1982) has noted that major change in schools takes years to be fully operational, and these data support his view. However, the data also may support the effects of early intervention. First-year first graders began in Success for All in first grade. Second-year first graders began in kindergarten, and third-year first graders began in prekindergarten. Cumulative effects of these early experiences are also likely explanations for the growing effects at each grade level.

4 Conclusions

The Success for All evaluations took place in some of the most disadvantaged schools in the US, including the very highest-poverty schools in Baltimore, Philadelphia, and Memphis. These schools suffer from all the problems of high-poverty schools, from under-funding to low staff morale in many cases to bureaucratic problems of large urban systems to unsafe neighborhoods to limited ability on the part of many parents to support their children's success in school. Yet these schools have many resources which have traditionally been underutilized: many dedicated teachers and administrators who care deeply about children, many parents who are able to support the school if they are invited to do so, and most of all, young children who have not yet experienced anything that would contradict their very positive self-images as learners. What Success for All shows is that even in the most disadvantaged of schools with all of the problems so often associated with these schools, the staff, parental, and student strengths that have always been there can be activated to significantly enhance the educational outcomes for children.

A major limitation to the replicability of Success for All is its cost. Success for All is an expensive program in its full form. The main additional costs are for tutors and the facilitator. In the US, these staff are usually paid for by federal Chapter 1 funds that schools would have received whether or not they used Success for All; in most cases these teachers would have otherwise been doing remediation in small groups. Sometimes special education or other funds are also used. Replicating Success for All in other locations requires a careful review of existing funding and a shift of funds away from remediation toward prevention and early intervention.

However, it is possible to implement a much reduced form of the model and still improve student achievement. We have experimented with forms of the program that do not use tutors, and the results indicate that the reduced program creates success for *more* though not success for *all*. That is, it increased overall achievement but did not have the outstanding impact on the most at-risk children that is typical of the full program (Slavin et al., 1992). In schools with limited resources Success for All would still be much better than traditional methods but might not reduce retentions or special education placements to the same degree.

Success for All provides one practical demonstration of what a comprehensive program of prevention and early intervention might look like. The results of the Success for All evaluations show that a schoolwide focus on prevention and early intervention, improvement of classroom practice, and constant, curriculum-based assessment of students and of the program itself can have major payoffs for children. We would not suggest that the particular constellation of elements implemented in Success for All is ideal or optimal. In fact, the program itself varies in important ways from site to site depending on the nature, needs, and resources of each. What is common to all Success for All sites and must become common to high-poverty schools as a whole is a relentless focus on the success of all children, a commitment to see that learning problems are prevented as much as possible, and are recognized and intensively remediated early on if they do appear. The first line of defense is preschool, kindergarten, and improved classroom practice. If this is not enough, tutoring or family support services are brought in, or changes are made in classroom instruction to meet individual needs. If these are not enough, school staff experiment with other solutions. The commitment is never to give up until a child is succeeding.

Every September, another three million confident, eager, and motivated five-year olds enters US kindergartens. The essential goal of policy for at-risk children must be to see that every one of these children leaves the primary grades as confident, as eager, and as motivated as they came in, with the skills they need to make it in the later grades and a well-founded expectation that the rest of their schooling will be as rich and as successful as that which they have experienced so far. Success for All provides one model of a program designed to meet this goal.

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CRITICAL ISSUES IN THE EVALUATION OF PRESCHOOL INTERVENTION PROGRAMS

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1 Definition of position

The evaluation of interventions (e.g. preschool programs, public transportation schemes, drug abuse prevention programs, new medicines, agricultural innovation programs) is intended to establish causal relationships: between the interventions and their intended effects. Both the interventions and their effects are variables to be observed or measured validly and reliably and the causal relationship between the two must be established in carefully designed situations. In this respect, the evaluation of intervention programs shares the doctrine of empirical sciences.

The following example illustrates why it is important to draw causal conclusions based on designs that permit causal inferences and take into account valid and reliable measurement of the variables involved. This example comes from my own experience, it has not been published and I use it only to illustrate what I mean.

The school advisors of an education support institute introduced new guidelines for the implementation of educational innovation. Let us call it 'the new school counselling strategy.' This strategy was developed in order to overcome the disappointing results of the more traditional strategy for implementing educational reform (courses for teachers, followed by school staff meeting, the school advisor to discuss how the reform was being implemented). The new strategy was developed in close cooperation with the institutes' school advisors and incorporated many of their suggestions, together with the results of research in this field. A manual of the strategy was prepared and the school advisors were extensively trained in how to apply the new strategy. In the light of the experience from the first year, the strategy was revised until almost all of the advisors were satisfied. The revision procedures involved much group discussion. After two years the school advisors were asked if they had used the new strategy and what results they had obtained. The teachers were also asked the latter question.

Almost without exception the school advisors indicated that they had used the new strategy extensively and that implementing the educational innovations (guided by the new strategy) was very successful in most cases. The teachers told us the same: most of the innovations could be considered a success. So far so good: much group work with those directly involved had apparently led to a widely used and effective counselling strategy. Unfortunately, the management of the institute decided to conduct a more empirical evaluation of the strategy, in which the variables had to be more carefully observed and in which the causal relationship between strategy and level of implementation of the educational innovation had to be based on a more firm research design, permitting causal inferences.

Compared with the early perception data obtained from advisors and teachers the results of the study were rather disappointing. The advisors appeared to be implementing only about 30% of the strategy procedures. Thus we were virtually evaluating a non-event, and the level of implementation of the innovation was, on average, somewhere between 50-55% of the activities included in the teacher manuals. The correlation between the two variables appeared to be 0.19. In the comparison group the results also suggested implementation levels of 50-55% of the innovation, but these results were achieved with much less effort and time: the school advisors in the comparison group used the more traditional strategy for guiding innovation. The unavoidable conclusion from this example is that the perceptions of the people directly involved, however satisfied they might be with the intervention and its results, are insufficient for causal conclusions to be drawn. Perception and opinions alone are too weak a basis for effective long term policies.

In this chapter I discuss the three main issues in designing an evaluation study: the definition and measurement of the independent variables, of the dependent variables and the design of the experimental situation for drawing causal conclusions (section 2). Next to these the value and use of evaluation outcomes are discussed (section 3). Three evaluation studies of intervention programs are critically reviewed (section 4) in the light of the conclusions of the sections on designing and use of evaluation studies.

2 Three critical evaluation issues

Designing an evaluation study includes three main issues. Firstly, defining and measuring the independent variable, i.e. the variable controlled by the evaluator (or manipulated by the evaluator). In the case of evaluating intervention programs this is the program itself (another term often used for the experimental level of the independent variable is 'treatment'). Secondly, defining and measuring the dependent variables: these are the outcome variables: the effects of the intervention. Thirdly, designing the experimental situation itself: a set-up in which several causal conclusions can be drawn by controlling for other possible causes of the effect(s).

In this section I restrict the discussion to designs for summative evaluation. Summative evaluation is used to assess the intervention as a whole; in contrast to formative evaluation which is much more piecemeal and is intended to help the program designers revise the program during its construction. Of course, the results of summative evaluation can also be used for that purpose, but their primary goal is to assess the program as such.

Let us first consider the intervention itself. In the preschool period almost all interventions consist of curricula or programs. These programs are to be implemented by parents, teachers or other caretakers of young children. In terms of experimental design these programs define the experimental level of the independent variable (the other level of this variable, the control level, will be discussed later). The most important characteristic in classic experimental design is that both levels of the independent variable are fully controlled by the evaluator. But such strict control is possible in laboratory situations only. In real life situations, total control of the experimental level of the independent variable is beyond the evaluator's reach. This problem is solved by measuring the level of implementation of the program (cf. Snyder, Bolin & Zumwalt, 1992). This level can be different for different performers: not all parents (etc.) will carry out the program in the same way and to the same level. In real-life situations these differences have to be taken into account; single-value experimental levels do not exist, many values can be observed: every performer has his/her own value. Measuring the implementation level can prevent us from evaluating non-events. If a program is not implemented or is implemented badly, it is pointless to evaluate its effects: if there is no cause (a properly implemented program), there cannot be effects (cf. Fullan, 1983).

After measuring the implementation level, only situations in which this level is judged to be sufficient are taken into account. In these situations it is common practice to observe the program effects because we expect these only in situations in which the cause (the sufficiently implemented program) is present. When starting the evaluation study, an evaluator has to ensure that he/she is going to evaluate a program for which there are enough instances of it being well implemented. If it is felt that not enough situations exist, it is better to cancel the study (or to change it into an implementation study). In real-life situations it is conceivable that programs that are not well implemented nevertheless have positive effects. If one suspects this is the case one can of course try to find out which effects these are. But in such a situation the effects have to be ascribed to an aberrant form of the program.

The second problem to be solved in designing an evaluation study of a preschool intervention program is the definition of the intended effects of this program, or in experimental terms, the dependent variables. There are short term and long term effects. The short term effects can be observed on children immediately after they have completed the program. These effects accurately cover the content of the program and may be directly influenced by the program itself. (Another term frequently used in this context is the 'impact' of the program.) The short term effects should be considered as necessary (but not sufficient) conditions for realizing the far more important long term effects. Of course, the observed effects must satisfy some preset criteria: for example the children must have mastered a certain minimum of the program content. Only if a short term effect that satisfies preset criteria is reached can we speak of a necessary condition. It is not meaningful to say that a necessary condition has not been fulfilled, even though the long term targets have been realized. That would merely show that the program is not necessary for achieving the long term targets! There are two sides to the coin. If the short term effects are not achieved, there is no need to investigate the long term effects: they cannot occur as consequences of the program, because the program (= the desired short term effects) did not impact on the children involved. It is simple logic: no cause, no effect(s).

As mentioned above, in relation to the sufficient implementation level of programs, it is conceivable that programs that do not achieve their own short term goals, do achieve the expected long term effects. There is no theoretical basis for this, but it is conceivable. If one expects such a situation, it might be good policy to monitor these long term effects and to seek for an explanation for them.

The long term effects are the more important program effects. They can be stated in more personal terms (e.g. school success) or in more social terms (e.g. less inequality). Ideally, to make a reasonable case for the causal connections between short and long term effects, the designers of a program should present the evaluator a causal model that includes the paths between the short and long term effects and takes account of the intervening and other explanatory variables. This model should be based on the research literature. (By 'intervening variables' I mean variables that mediate between short and long term effects, and by 'explanatory variables' variables that directly or indirectly influence the long term effects -thus, they always include the intervening variables. Together they define a complete causal model.) In fact, this model 'transfers' the short term effects to the long term effects; therefore the long term effects are sometimes called the 'long term transfer effects.' If necessary, criteria that must be met in order to be able to speak about a 'successful program' can be added to these long term effects. For instance, the long term effect is 'school success,' the criterion is: child graduates from an intermediate secondary school at least; or the long term effect is 'diminishing inequality,' the criterion is: the number of students of lower socioeconomic status at universities will increase by at least 10%. If the variables in the causal model take at least a certain threshold value, they define the minimum conditions under which the long term effects are considered to be achieved. For a concrete example of modelling the causal effects in this way, see Slavenburg (1991).

In conclusion, the intended effects of an intervention program can be divided into short term, content-based effects, directly controlled by the program itself, and into long term effects resulting after the transfer process in which the short term effects are changed by intervening and other explanatory variables. This transfer process can be modelled in a causal or explanatory model. The long term effects are the more important effects. Criteria that define program success can be added to both the short and long term effects.

The third problem to be overcome when preparing an evaluation study of a preschool program concerns the design to be used in order to be able to draw causal conclusions. As stated above, special evaluation designs are necessary. Normally, these designs are called 'experimental,' but this term is inappropriate, because many designs referred to as 'experimental' are not. I will briefly discuss the three most common types of experimental or evaluative designs: experimental, quasi-experimental and non-experimental (cf. Slavenburg, 1989).

In experimental designs (Fisher, 1949) the experimenter has full control over the independent variable that has at least two levels defining at least two groups of 'equivalent' experimental subjects (= children): the experimental group and the control group. Both groups operate under exactly the same environmental or 'constant' factors (same teachers in day-care centers, same parents etc). The only difference between the two groups is the different level of the independent variable, the implementation of which is completely controlled. Most times it is impossible to implement experiments that meet the requirements of an experimental design. Even if the requirement for equivalent experimental subjects to be compared in the groups is waived, by allowing them to be identical in statistical terms (random assignment followed by testing for random error; Edington, 1978), it is still impossible to implement such a design.

Firstly, the problem of full control of the independent variable cannot be solved. As already demonstrated, the evaluator cannot manipulate the independent variable in the experimental group or in the control group. As noted above, he/she can aim for optimal implementation of the innovation in the experimental group, but that is not the same as really controlling this implementation. At best the evaluator can observe the level of implementation of the independent variable in the experimental group; the same goes for the control group. However, in this group there is a second problem: defining the level of the independent variable, mostly referred to as the 'traditional activities or programs' (as compared to the innovative programs in the experimental group). But what are these? Nobody really knows.

Secondly, even if the requirement of equivalence of students in the experimental and control groups is lowered to statistical equivalence, difficult practical problems will still have to be solved. The random assignment of children to the control or experimental group implies the possibility of transferring children at random from one day center to another, or from one family to another, which is out of the question. Moreover, it is impossible to maintain the randomness of the groups over a longer period of time. Children will leave and enter centers, schools etc. in a non-random fashion over such a long period. There are no really adequate solutions to this problem. Sometimes one is advised to select centers or schools or even families at random, instead of children. That is not the answer. This does not change the comings and goings of children in the groups, and group characteristics are generally determined by populations of children, so they will be affected by this. Furthermore, selecting centers, schools etc. at random is merely a cosmetic solution for the problem of diminishing randomness.

Thirdly, the requirement of constant environmental factors in the experimental and in the control groups has to be met. The factors will differ: the (day-care)teachers are not the same, neither are the parents. Random selection of these environmental factors could solve the problem, but that is obviously impossible and besides, this randomness will diminish in long term evaluation studies.

Evidently, few of the requirements of an experimental design can be met in practice, so let us examine whether quasi-experimental designs are of more practical use (Cook & Campbell, 1979; Trochim, 1986). There are two major differences between true and quasi-experimental designs. In quasi-experiments it is not necessary to control fully the independent variable nor to determine equivalent experimental and control groups by random assignment. Usually, the levels of the independent variables in the experimental and control groups are observed, instead of controlled, and only partly equivalent groups are determined. The levels of the independent variable are usually defined as the intervention program in the quasi-experimental group and as 'the traditional situation present' (in the quasi-control group). As indicated earlier, this latter definition is problematic. Concerning the experimental level, the evaluator has to check if the implementation of the intervention program is sufficient, to avoid the evaluation of a non-event.

To determine partly equivalent groups it is unnecessary to transfer children from one center or family to another. The partial equivalency is created by controlling some of the most important confounding variables. But this is difficult with young children. Several technical procedures are available as control measures, including:

- ascertaining no differences on pretested variables between children of the experimental and control groups (by pair wise matching or mean group matching);
- calculating gain scores between pre- and post-tested children variables in the experimental and control groups (change score analysis);
- correcting for pretest differences by subtracting pretest based predicted post-test scores from the observed post-test scores (analysis of covariance).

The above can establish equivalency between only a few confounding variables. A large number of children is required for matching, because for most children no match will be found. Change score analysis is based on the assumption that child variables have no direct influence on the effect variables during the quasi-experiment: their influences are considered to have only an indirect effect via the pretested variables. This is not always true, especially not in longitudinal research. Some confounding variables do have direct influences, independent of their indirect effects via the pretested variables. A more practical problem of change score analysis -particularly in longitudinal designs- is that there are no instruments which can be used for pre- and post-test measurement. In exceptional cases it is possible to use the same tests as pre- and post-tests; sometimes, especially in evaluation studies of preschool programs, the same intelligence and language tests can be used. That is of course much more difficult for measuring achievement in elementary schools (how should we subtract first grade scores from eighth grade scores?) New developments in test constructions (based on item response models) might solve this problem; in theory they do, but the "pudding has not yet been eaten."

Covariance analysis solves the problems; it does not require the use of the same instrument for pre- and post-test measurements and the effects of confounding variables not mediated by pre-measured variables can be taken into account, providing the statistical assumption of additivity is met. In short, in quasi-experiments random control is replaced by measuring some of the most important confounding variables and by 'subtracting' their calculated effects from the outcome variables. The resulting outcome variables are then called 'corrected'; the corrected variables are assumed to be determined by the independent variable only. A basic assumption is that the variables one wants to correct for are both known and measured.

In quasi-experiments there are no solutions to the problem of the independent variable in the control group (here, the defining of the 'traditional' programs or activities) and to the problem of keeping the environmental factors constant. These problems are the same in experimental and quasi-experimental designs. I wish to point out that all kinds of combinations between experimental and quasi-experimental designs may be used to increase the validity of causal conclusions based on these designs. For example, pair-wise matching followed by randomly assigning the students to the control or to the experimental group, or using covariance analysis in experimental designs for eliminating a non-randomly controlled variable etc. I have not considered quasi-experimental designs like regression discontinuity, interrupted time series and repeated treatment, because they have not been devised for establishing long-term cumulative program effects.

Non-experimental designs or correlational designs (Saris & Stronkhorst, 1984; Wold, 1982) are so called because of the absence of control groups. In these designs the independent variable plays a key role. The evaluator cannot control this variable (as in a true experiment), and merely observing if the preschool program is present (as in a quasi-experiment) will not be enough. The evaluator has to measure the implementation level of the program. Differences in implementation level define the 'levels' of the independent variable in non-experimental designs. The nature of these variables changes from 'categorical' into 'continuous' (degree of implementation, for example, number of program activities performed by the teacher).

In non-experimental designs the confounding child characteristics are not controlled by random procedures but by expanding the basic idea of covariance analysis: all of the important confounding variables must be measured and then their contributions to the effect variable can be estimated with the help of 'causal' or 'path' models. In these models the confounding child variables are related, with the independent variable, the intervening variables, and with the effect variable. The independent variable, the intervening and the confounding variables in fact receive the same 'status': that of variables explaining the effect variable. Hence these variables are sometimes called 'explanatory' variables: variables explaining the effect variable.

The problem of the influence of the environmental factors is solved in exactly the same way. No ingenious procedures for keeping them constant in the experimental and control groups are needed any more. The confounding environmental factors are measured and fitted into the causal model, so their influence on the effect variable can be estimated taking into account the effects of all other variables involved. They also become explanatory variables.

A causal model contains all the important explanatory variables for a particular effect variable (or, in the multivariate case, for even more than one effect variable) as well as the specification of the relationship between these variables. The model variables are measured, these measurements are converted into correlation or covariance matrices and the causal coefficients for each of the variables are calculated from these matrices. These coefficients are estimates of the strength of the influence from the explanatory variables (relative to all other explanatory variables in the model). If there is a causal relationship between the independent variable and the effect variable(s), the causal coefficient between them must not equal zero. A discussion of the statistics involved in the calculation of the causal coefficients is beyond the scope of this chapter.

It should be mentioned that this type of non-experimental research has many advantages, the main one being its practicality: it is unnecessary to transfer children for random assignment or to keep the environmental factors constant, or to fully control the independent variable. The evaluator can observe and evaluate the program as it is carried out. There are other advantages. Since no special measures have to be taken in order to control child characteristics and environmental factors, the universal validity of the conclusions is enhanced. Since so many explanatory variables are taken into account, the evaluator can even specify the conditions (= the values on the explanatory variables) under which the innovation proved to be successful. And if the innovation is not successful, the evaluator can specify which explanatory variables have mainly influenced the effect variables. In other words, he can point out possible causes for lack of success.

As well as advantages in using causal models, predictably, there are also many problems. The most difficult of these is devising the causal model itself. This model must be complete (no important explanatory variables may be omitted) and the interrelations between the variables must be correctly specified. Furthermore certain statistical assumptions that depend on the kind of statistical analysis procedures to be used, have to be met. If specification errors are made, the model will lead to spurious conclusions. Therefore model designing requires expertise, and must take account of the results of previous research on the effects of the explanatory variables (meta-analyses of these variables provide good starting points for model building; Glass, Mc Graw & Smith, 1981). Field testing is necessary to establish the fit of the model, and inappropriate models must be modified. The cycle of field testing and modifying has to be repeated many times before the model is satisfactory. Testing, modifying and re-testing take much time. Normally, evaluators do not have the time and therefore model field testing and data collection for the evaluation are sometimes combined. Of course, such a combination is not the best way of validating causal models, but often it is the only way. To sum up, when evaluators have a validated causal model it is probably a good idea to base the evaluation study on this because of all the advantages mentioned.

Other practical problems are the number of experimental units needed for designing and validating causal models (e.g. at least 100 for simple models) and measuring the variables involved, which must fulfil strict statistical criteria (and measuring all these variables is very laborious). In addition there may be many statistical problems too, due to the multi colinearity of the model variables.

Obviously, all kinds of combinations between experimental, quasi-experimental and non-experimental designs are possible. A quasi-experiment, for example, can be modelled in the form of a causal model ('structural means comparison'; Sörbom, 1982) and so on. Different designs leading to the same causal conclusion corroborate this conclusion.

What can be learnt from this brief review of experimental designs that can be used in devising evaluation studies of preschool programs? Mainly, that they have different advantages and disadvantages, especially regarding practicability, and that there are no simple solutions for choosing one of the designs. However, a strategy has been evolved to handle these problems. This strategy presents repetition as a remedy: 'repeat' the causal investigations as many times as possible in the hope that the outcomes will converge. This remedy is put into practice by choosing different designs at the same time: quasi-experimental and non-experimental (e.g. to compare a quasi-experimental group with a quasi-control group and to compare low-level implementation situations with high-level ones, and to develop and test causal models etc). If the same causal conclusions can be drawn we can be relatively sure of the causal connection. The next step in this repetition strategy is to fit the outcomes into the larger framework of the outcomes (e.g. reviewed by meta-analysis) of the preschool evaluation programs. If they do not fit, but show more favorable outcomes, then the next step must consist of repeating the evaluation study in several new situations. These repetition procedures should yield the corroborated evaluation results required.

3 Value and use of evaluation outcomes

Practitioners, program developers, policymakers and so on have to make decisions, all day and every day. Sometimes these decisions imply much money and effort. Ideally decisions of this type should be based on a good understanding of the effects of the measures they are concerned with. The results of evaluation studies can provide such a basis, that is why they should be valued highly. Unfortunately, they are not; they are used only to a limited extent by decision makers.

Policy makers are primarily interested in evaluation outcomes that address problems which are on their short term agenda (cf. Husén, 1990), because in democracies agendas last only a few years. That is why it is often unsatisfactory for policy makers to fund long-term evaluation studies, the results of which arrive too late for their decision making. Another problem is that policy makers are not always interested in the results of evaluation studies if these results do not 'fit' into their policy. Effectiveness is less important than the voters' favor. Publicity about ineffective preschool programs is not popular; positive studies about effective programs are. A third problem is that many evaluation studies are not known to the policy makers because their results are not properly disseminated. But surely the evaluation outcomes could be useful to policy makers? Indeed, they could. To answer the question whether preschool programs should be implemented or not, it is useful to know if these programs affect the school success of children taking part. Also, which of the available programs is most cost-effective?

To answer the first question, reviews and meta-analyses of preschool evaluation studies should be consulted and the evaluation procedures used for programs claimed to be successful should be carefully reviewed. To answer this type of question, however, it is not a good idea to specially design an evaluation study that would take several years; neither is it a good idea to consider only one successful evaluation report. The results of these programs must be considered in relation to those of other programs (see section 2). After consulting these reviews (e.g. Farran, 1990; Eldering, 1991) one can only conclude that no really effective preschool programs exist. So in this case, policy making cannot be based on positive evaluation results. It would be wise to implement no preschool programs, but instead to do something totally different: to develop, evaluate and revise prototype preschool programs that will be successful. The cycle of developing, evaluating and revising must be repeated again and again until a successful program is available. This takes much time and money, but I do not see any other way to make successful programs. In medical research it is normal for the development of a vaccine against disease to take ten, twenty, or more years. Why would a much more complex problem, such as educational inequality, and the role of preschool programs to overcome it, be solved by a program developed in a few years? Vaccines that are not effective are not authorized, yet preschool programs are. The implementation of such programs is sometimes fostered even if it has been shown they do not work well. This policy is wrong because the children involved do not profit sufficiently.

What is true for policy makers is also true for program developers. When developing new preschool programs they should use the results of evaluation studies of these types of programs, to save having to reinvent the wheel, and make the same mistakes, and also to make progress possible: the new programs must be more effective than the one already in use.

The results of evaluation studies are especially important at the most basic level (the institutions and centers that have to decide which preschool program to implement); the cost-benefits question cannot be ignored. Unfortunately, the results of evaluation studies are rarely known to people at this level.

In conclusion, the results of evaluation studies can be of great value to decision makers (policy makers, program developers, practitioners, etc.). The results enable them to make more informed decisions, which can prevent disappointment in the long term. However, in most cases the results of evaluation studies are not used for decision making; they are not well disseminated and they do not always suit the decision-maker's own position. This is a rather complex problem and discussing solutions is beyond the scope of this contribution (cf. Keeves, 1990).

4 Evaluation issues in selected programs

In this section I discuss the three evaluation issues discussed in section 2, in relation to three preschool evaluation studies: the Dutch evaluation of the HIPPY program, the Success for All program and the Turkish Early Enrichment Program. I also pay some attention to the use of the outcomes of these evaluation studies.

Home Instruction Program for Preschool Youngsters (HIPPY)

The Home Instruction Program for Preschool Youngsters, abbreviated to HIPPY (Lombard, 1981), in an adapted form for Dutch multicultural society, was evaluated during 1987-1991 (Eldering & Vedder, 1992; Eldering, 1992). The evaluation study aimed at exploring whether this Israeli program could be transferred to Dutch society and its effects on parents and children. I shall consider only the part concerning the effects on children. The evaluation study was carried out within the empirical evaluation tradition, which is why I basically agree with its design and implementation.

The first evaluation problem to be solved concerns the control over the independent variable, in this case, the HIPPY program. To avoid evaluating non-events, the level of implementation of the program must be observed and only the effects of a sufficiently implemented program should be taken into consideration. In the HIPPY evaluation study much time was spent on observing the implementation level. The number of week tasks executed was counted, and the number of parents dropping out of the program early was recorded, as well as the number of contacts with para-professionals and the number of group meetings. These figures were compared with those prescribed by the program manual, and it turned out that the number of week tasks executed satisfied the definition of sufficient implementation. In general, the program was not optimally implemented; this meant that its effects could be underestimated. As noted earlier, it is difficult to control the independent variable. No data were presented about the reliability and validity of the measurements of the independent variables.

The second issue concerns the dependent variable. The main goal of the HIPPY program was to enable the children to become 'good pupils.' This goal was operationalized by measuring non-verbal intelligence, Dutch vocabulary and classroom behavior. The instruments chosen to measure these dependent variables all correlated strongly with school achievement scores. Their reliability and validity are well established. No criteria were defined on these variables (on how well the experimental children should score). The criterion problem was solved statistically: the experimental children had to score significantly better than the control group. Using this definition the evaluators got round the difficulties of defining real criteria: how much better should experimental children score, to be able to call the program a success (e.g. 1/3 standard deviation, or, at least at national average level, etc.). In my opinion it is not a good idea to define statistical significance as a success criterion: if there are a few children more in the experimental group, every small difference will be significant. I would have preferred more substantial criteria. The causal connection between the short term and the transfer goals was not analyzed in this evaluation study.

The third evaluation problem, the designing of the experimental situation to draw causal conclusions, was solved by implementing a quasi-experimental design, supplemented with some statistical control procedures. The aim of a quasi-experimental design is to get the quasi-experimental and control groups as equal (on average) as possible on all relevant confounding variables and to control statistically these confounding variables for which this mean equality could not be realized. Consider the design of the intelligence measurement. Two groups of children were established on the basis of selectionmatching. The pre-experimental equality was taken for granted, if both groups were selected from the same population in the same way. The characteristics of the population controlled for in this way were: ethnicity, neighborhood, age group, socioeconomic status, sex. Intelligence was pre-measured and average equality could be established between the two groups. Intelligence was also post-tested; the post-test results showed no average differences either, even when controlling for the pre-test results, by entering them as covariate data in an analysis of covariance. The evaluators had to conclude that no differences in intelligence existed between children who participated in the HIPPY program and children who did not. This conclusion is coloured by the finding that children of mothers who participated more frequently in the program scored higher on the intelligence tests and on classroom behavior. So there seems to be a positive connection between level of implementation and intelligence.

In my view the HIPPY evaluation is a carefully designed study, with only a few minor shortcomings. The results of this study, and not only the few discussed here, should lead to the conclusion that large scale implementation of the HIPPY program, which is under way now in the Netherlands, will probably not be very effective. But this conclusion could not be drawn; first of all, because large scale implementation was already under way (the policy makers could not wait for the results of the study) and could not be stopped; secondly, because a radical improvement program of HIPPY had already been started. The results of the evaluation study should be incorporated into this improvement; it was also recommended to the project staff that intensifying program implementation could lead to higher intelligence scores. Unfortunately, taking into account the evaluation results, we have to expect another disappointment for the Dutch Education Priority Policy: the HIPPY program did not bring the results hoped for. The evaluation results were well disseminated, even directly to the Minister of Culture and Social Welfare, but they probably came too late to change the policy makers' minds and they did not fit into the political climate which strongly favors the HIPPY program.

Success for All

The 'Success for All' program is a research-based preschool and primary school program (grades 1-3) for low-achieving students (Madden, Slavin, Karweit, Dolan & Wasik, 1993). The evaluation study aims at studying its long-term effects on third-grade students. Here I shall consider only the evaluation of the preschool and kindergarten sectors. The evaluation study was carried out within the empirical traditions, and therefore I basically agree with its design and implementation. The following discussion is based on the evaluation summary articles published by Slavin, Madden, Karweit, Liverman & Dolan (1990) and by Madden et al. (1993).

The first evaluation problem to be solved is the control over the independent variable, in this case the preschool and kindergarten programs. In the case of the 'Success for All' program, the many small curriculum components define the independent variable and its experimental level: language, mathematics, social studies, music, art activities, reading readiness, retelling stories, working cooperatively and independently. Above and beyond these activities a family support program was in operation. As far as I know, no serious attempt was made to measure the level of implementation of all the activities listed. Neither did the evaluators try to measure the implementation level of the control activities in the comparison group. Via program facilitators (or school advisors) and by providing intensive training for teachers and teacher aides, the program staff tried to implement the curriculum activities as well as possible. No direct checks were made of the implementation level of the experimental level or of the control level of the independent variable.

The second evaluation problem concerns the dependent variable(s). The main goal of 'Success for All' is to have students reading at or near average level by the third grade, maintaining proper reading levels throughout primary school, avoiding having to repeat a year and special education. Standardized tests of well-known validity and reliability were used to measure the reading levels in grade 3 (and in the preceding grades). Data collected regularly by the school were used to measure grade retention. Data on the referrals to special education were included in the first but not in the second article. By choosing a clear definition of success (at or near grade level) on one of the three dependent variables, the evaluators did not need the ingenious 'significant differences' criterion. Unfortunately, for both the other dependent variables no success criteria were defined. No measurements of the 'direct' or 'short-term' results were taken, so the question of whether the program components achieved their own short-term goals cannot be answered; nor can the causal connection between the short and the transfer goals (grade level reading, retention, referral to special education) be analyzed.

The third evaluation problem, the designing of the experimental situation to draw causal conclusions, was solved (as in the HIPPY evaluation) by implementing a quasi-experimental design, supplemented by some statistical control procedures. The quasi-experimental and quasi-control groups were selected by matching schools on several school characteristics (percent of free lunches, achievement level in the past) and by matching students in schools on several student characteristics (as measured by standardized achievement tests).

No figures about the matching results or about the reliability and validity of the measures used were published. No random assignment of each of the pair-wise matched children to the control or experimental group took place (this would have been virtually impossible). Thus, statistical testing implies testing for the 'naturally emerging random factors' only. A next and far more promising way of controlling was introducing pretest measurement as a covariate. By so doing, the most important student characteristic -achievement level- was taken care of.

Apart from the already mentioned matched-for characteristics, some other school characteristics were controlled by measuring them and partialling out their effects, such as level of resources and number of years a school has been participating in the program (again without data on the validity and reliability of the measurements).

Because the effects of the preschool and kindergarten programs have a causal path, starting in the preschool and continuing via kindergarten, first and second grade to third grade and so on, intermediate measurements on the dependent variables were taken in all these grades, so the causal path could be traced.

As far as early intervention in preschool and kindergarten is concerned the results of this carefully designed evaluation study show, that substantial effects appear on the reading test scores and the grade retention figures from grade 1 upwards. This resulted in a third grade reading level almost as good as aspired for, with only 11% of the students still reading under grade level (38% in the quasi-control group!).

Several replications of this evaluation study are under way in the US and certain other countries. The results of these studies may reinforce the positive results of 'Success for All.'

The 'Success for All' evaluation is a well-designed and implemented evaluation study, with only one important shortcoming and a few less important ones. The major shortcoming concerns the lack of control of the independent variables: no measurement of the implementation level was carried out. The positive results of this study should lead to the conclusion that replication studies are needed, and this conclusion was indeed drawn. Also, these results indicate that dissemination of the 'Success for All' program is probably worthwhile. Indeed, many school districts in the United States have adopted the program. Cost effectiveness calculations indicate that investments in this program will pay off. In this case, the school districts were the main users of the evaluation results when they decided whether to introduce the program.

Turkish Early Enrichment Project

The Turkish Early Enrichment Project (see the contribution by Kağıtçıbaşı in this volume) is a Hippy-based project in which the main component is training the mothers. Via this form of adult education the development of the child, in this case the 'whole child,' is stimulated. In this context 'whole' means both the cognitive development as well as the social-emotional development. (see also Kağıtçıbaşı, 1989).

The first evaluation problem to be solved in the seven-year longitudinal study of the Turkish project is the control of the independent variable, i.e. the Turkish Early Enrichment Project. Neither of Kağıtçıbaşı's articles present any figures or clues on this important point. Nor are data on the control level of the independent level presented; we are simply informed that there was a control group. Both these facts prevent sound causal conclusions being drawn.

The second issue concerns the dependent variables. Many of them were identified: effects on mothers and on their children. No psychometric data of the instruments to measure them are provided; we are merely informed that one of the instruments used was standardized for the Turkish situation (the vocabulary subject from the WISC-R). Thus I cannot comment on the operationalization of the effect or dependent variables either. No clear evaluation criteria were defined, except the apparently unavoidable 'statistical significance' criterion.

The third point is the evaluation design chosen. Here too, not enough information is provided. We are informed that a randomly selected sample of mothers was given the training, that this sample was pre- and post-tested, but it is not stated how the control group was established. Quite impressive results were achieved in the follow-up study: the researchers retrieved almost all mothers and children from the control and experimental groups (attrition rate only 10%). No explanation is given for these exceptionally good results; do special context factors contribute to this high attainment? The children (adolescents meanwhile) in the experimental and control group are compared on cognitive and social-emotional variables, as are their parents. The statistical significance is tested seperately for each dependent variable. On almost all variables the experimental adolescents score statistically significantly better than the control group. However, many aspects of this evaluation design remain unclear. What was the purpose of the randomization: to have a representative sample for drawing externally valid conclusions? Or, was the purpose to create statistically equivalent experimental and control groups of mothers? In other words: has the experimenter tried to implement a classic design? As stated in earlier sections, I prefer other criteria than statistical significance as a success criterion; moreover, in this case statistical interference was not adequate. Multivariate testing would have done a better job in avoiding type I errors.

The author states that the implications of her research have materialized as public service: the mother training program is in actual use in a number of settings in Turkey and it has even been partly adopted by Turkish television. The research is also being used in the further development of the program (and there is even a spin-off for the Netherlands). Thus, the research results are well disseminated and used.
However, because many important details and data are lacking, the outcomes of this experiment cannot be adjudged as sufficiently valid.

The main conclusion to be drawn from discussing evaluation issues in the three selected programs is that it is possible to design and implement evaluation studies that yield valid and trustworthy outcomes within the framework of the empirical tradition. Of course, many practical problems have to be solved and many compromises have to be made, but nevertheless this kind of evaluation study is feasible. The second conclusion is that evaluation results can really be useful in the decision-making process, as the many school districts that have introduced the 'Success for All' program have shown us.

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COOPERATIVE, COMMUNITY-BASED EVALUATION OF PRESCHOOL PROGRAMS

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1 Introduction

This chapter on the evaluation of programs for children in their preschool years is written from the point of view expressed in the senior author's evaluative study of the Parents and Children Program in Chile (Richards, 1985). It posits that empirical research ought to be measuring the extent to which a program or project nurtures the growth of norms of solidarity and cooperation among children, and in the families and communities where the children live. This viewpoint does not imply the neglect of cognitive development, native language proficiency, or school achievement; rather, it places them in a context of holistic child development, parental empowerment, and community building.

It is increasingly widely accepted that research on preschool education should include the home. For example, Eldering has written, "Focusing on the effects of a programme on children and at the same time blaming the parents for the educational arrears of their children, without studying how to change attitudes and parental behavior, reflects a short-sighted view in policy in research and public debate." (Eldering, 1990, p.58). The view taken here, and developed at greater length in the senior author's study, is even more comprehensive and is as yet less widely accepted; we advocate programs that improve also the community context of child development, and we advocate methods of evaluation especially suited to assessing and to enhancing their degree of success in doing so.

This chapter will discuss three questions pertinent to any evaluation, undertaken from any point of view, and will focus on the particular ways the questions should be answered for programs whose leading goal is to nurture the social development of children, their families, and their communities. This paper is not addressed exclusively to those whose educational philosophy is similar to that of the authors, since even evaluations of programs inspired by philosophies which take enhancing the growth of cooperative norms to be a minor objective, or not an objective at all, must somehow reply to the three general questions: (1) What information will be gathered? (2) How will it be gathered? and (3) Who are the actors who will be planning, implementing, and using the evaluation?

2 The Parents and Children Program

Since in answering the three general questions just posed this paper will make references to the Parent and Children Program and to an evaluation of it, it may be well to begin not immediately by addressing the general questions, but rather by providing some background concerning Parents and Children. It began in rural Chile in 1972, partly a response to the studies done in that country and elsewhere during the 1960s, which showed home environment to be a major determinant of literacy and school success. Among the important influences shaping the program were the popular education philosophy of Paulo Freire (Freire, 1968); the somewhat piagetian Head Start materials developed at the High/Scope Foundation at Ypsilianti, USA; and the psychological findings of Darryl Bem showing attitude change to be a result, not just a cause, of action (Bem, 1967).

The values inspiring the program included the promotion of cooperation by people at the grassroots level to mobilize energy and resources to meet local needs. At the time the program first started the socialist Salvador Allende was President of Chile, and much of the nation, including many of the several thousand rural poor participating in the program, was embarked on an effort to transform society. The NGOs sponsoring the program, Center for Research and Development in Education (CIDE) and the radio station Voice of the Coast were both church-related, and although they were in principle non-political organizations their religious values coincided to a considerable extent with the ideal of building a culture of solidarity, which was widely promoted in the country at the time. After the military coup of 1973 which brought General Pinochet to power, the Parent and Children Program, together with its sponsoring NGOs became identified with the network of Christian and human rights organizations which formed the backbone of resistance to the dictatorship, and which continued to espouse the idea that by organizing the poor could empower themselve to solve their problems. The communitarian ideals of the program found ready support, too, in traditional values of the huilliche-mapuche indigenous cultures which were the heritage, or part of the heritage, of many of the program participants, as well as in important traditional values of those who did not identify as huilliche-mapuche.

Under the Allende government the Ministry of Education granted the Parents and Children project access to schools and to adult education facilities in land reform areas. After the military coup this support was withdrawn. The project was obliged to close at its initial sites and to relocate at new sites, where meetings were held for the most part in the private dwellings of peasants. Several staff members (including Father Cariola, the Director of CIDE, and the Dutch missionary Father Winfredo van den Berg, the director of the Voice of the Coast) were at one time or another jailed; one staff member was killed. After the re-establishment of democracy in Chile the program once again is able to work with the government; it is now collaborating particularly with the Ministry of Health.

An important methodological feature of the program was that at an initial stage an ethnographic study of the peasant population the program worked with was done by an anthropologist (Martinic, 1977). The aim was to know as much as possible about the culture before intervening in it.

The elements of the program included reading readiness and mathematics readiness materials, at first modeled on the Ypsilanti materials, but later modified to relate to local cultural reality and to deal with the problems the participants found most pressing. At a still later stage peasant mothers and fathers (mainly mothers) helped to create their own educational materials in workshops sponsored by the program. These materials were studied by the parents, and also in many cases by older siblings, at weekly meetings, and then applied with their children at home during the succeeding week. The weekly meetings were coordinated and facilitated by peasant monitors, who were themselves trained at monthly meetings at a central site. The meetings were supported by radio broadcasts of the Voice of the Coast through repeated announcements and encouragement to attend the meetings, and by reinforcement of program content. Some participating parents were themselves illiterate or barely literate, and they improved their own skills by studying the materials intended for the children and the monitors. The monitors were in principle volunteers, and it was important to the ideology of the program that they be regarded and regard themselves as volunteers working to serve others: nevertheless, they were sometimes rewarded by donations of powdered milk and flour provided through church agencies, and they were given bus fare for travel.

The literacy and numeracy learning materials were complemented by materials on nutrition, sex education, alcoholism, disciplinary problems, and how to form an organization. At the same meetings where the monitors faciliated group discussions with parents teaching the use of the materials, the same groups engaged in discussions analyzing the situation of their children and their own situation as peasant parents. As an outcome of these discussions organizations emerged and concrete actions were taken by the peasants themselves to further the welfare of the children in the community; such as, for example, forming a community first-aid kit to make available basic medical supplies; gathering a small collection of books for a neighborhood lending library; taking the children on short trips so they could see a bit more of the world; and constructing a community hall where they could hold their meetings.

3 The Evaluation of the Parents and Children Program

The evaluative study to which references are made below was done in 1982, at a time when the program functioned at sites in southern Chile during the Pinochet dictatorship. The program has had many revisions; has functioned at many sites, both rural and urban, in Chile and also in neighboring countries; and it has been the subject of a series of evaluative studies.

The evaluation process did not mainly rely on an experimental design, although random sampling and control groups did play a limited role in the 'triangulation' process through which results initially gathered by ethnographic methods were checked. The lack of experimental design was not entirely voluntary; in fact several of the schools and land reform areas where the project was closed by order of the military *junta* in the first days after the *coup* had been matched with control schools and control land reform areas. Another attempt to match an experimental neighborhood with a control neighborhood failed when the military government entered into competition with the program by establishing a kindergarten in the control neighborhood. Nevertheless, the decision not to rely mainly on experimental design was partly a deliberate choice. What are most interesting, from a scientific perspective, are not the impediments which made it difficult to implement an experimental design, but the reasons why the evaluation did not use standard design elements which it *malgré tout* could have used; and the reasons why the evaluation nevertheless claims to have established valid results.

The reasons weighing in favor of the decision not to rely mainly on an experimental design were several. One reason was that many experimental designs to be properly carried out require a level of implementation of a program high enough to assure the researchers that the treatment variable was in fact substantially the same as the treatment variable planned (see the article by Slavenburg in this volume). This can lead to such steps as writing a detailed manual for the program staff to follow, and requiring the staff to register in a log book confirmation that they have indeed followed the instructions for the day.

The Parents and Children Program, on the other hand, took much of its inspiration from the philosophy of Paulo Freire, and took as a working hypothesis the principle that people who are oppressed, demoralized, and apathetic can acquire self-confidence and self-esteem by planning their own activities, and then carrying them out. One of the important aims was to support the parents' efforts to gain autonomy and community solidarity, so that they could be better parents and create a better environment for their children. It would have been counterproductive to give them exact instructions.

A second reason was that the application of the Ypsilanti materials had already been exhaustively studied by the High/Scope Foundation. There were good grounds for believing that if those materials, or others similar to them, were used, then there would be benefits for the children. It was therefore thought that verification that the materials were actually used would go far enough to establish that there was a quality educational experience for the child and probably some benefit. The exact study of what constitutes a high quality educational experience for a child was perhaps best left to laboratory schools and to researchers working in other contexts where meticulous observation was possible.

A third reason was that even if it had been possible to partial out the effects of each relevant cause, and to distinguish what was due to non-program factors from the experimental intervention, so that it could truly be deduced that exactly what the program had done had produced measurable benefits, it could not be concluded that exactly what the program had done should be done again. Circumstances would change, and nobody, not even the same program staff, would repeat the same program in exactly the same way again. In general, successful programs vary their approach from year to year, from site to site, and from child to child (see Slavin & Madden in this volume; see also remarks on external validity in Richards, 1985).

Instead the evaluation took a cooperative approach, involving the community in the research process. Each organization which had been formed by the peasants as a result of the program elected an informant, and an extensive ethnographic interview was conducted with each informant. The results of the ethnographic interviews were combined to form a 'verbal image' of the program composed entirely of words supplied by the peasant informants. The verbal image was then duplicated and sent out to the countryside, where it was revised and corrected by each peasant group during one of their regular meetings, with no outside researcher present. The report was thus ratified and legitimated by the consensus of the community. As thus ratified, the verbal image became the script for a slide-tape presentation. The peasants' words were illustrated by photographing the realities they described, and the text and images were accompanied by music and poems composed and performed by program participants. The participants own appreciation of the program was thus returned to them in a form they could understand and enjoy.

The same verbal image served as a basis for a series of probes designed to determine whether the facts asserted in it were really true. The epistemological basis was the logic of realism. That is to say, it was supposed that there either was, or was not, a reality corresponding to the assertions made in the verbal image. If the reality is there, then it will manifest itself according to any and all tests employed to check whether it is there. If it is not there, then persistent checking will reveal that its appearance was an illusion. Aristotle said, in Nichomacheon Ethics, "With the truth everything agrees; falsehood soon comes into collision with the facts."

Further reasons for choosing not to rely mainly on experimental design, and further details concerning how the result were checked, will be provided below in the course of discussing the three general questions pertinent to any evaluation: (1) What information will be gathered? (2) How will it be gathered? and (3) Who are the actors who will be planning, implementing, and using the evaluation? It is now time to shift the focus to these more general questions, using the Parents and Children study as a source of illustrations and examples.

4 What information will be gathered?

Almost any review of evaluations of preschool education programs will show the continued prevalence of the tendency to look at product more than process, and to measure cognitive more than social outcomes, which were characteristic of the sixties and seventies. For example, we searched the ERIC early childhood database under several descriptors designed to select evaluations of preschool intervention programs, and among those we selected 46 empirical studies that at least fairly clearly indicated their methodologies. The bulk of the studies we selected (43) were from the USA, with one each from Australia, India, and Turkey. We found more emphasis on outcome measures than on the study of process (see Figure 1).

Figure 1: Titel

Outcome Information	Number of studies
Student Achievement[a]	26
Cognitive Development[b]	22
Native language proficiency	9
School Attendance[c]	6
Behavior and motivation in elementary and secondary school	6
Parents' learning of parenting skills	6
Social development[d]	4

a) This includes subject achievement tests, progress in school or the lack thereof, readiness skills, graduation, and post-graduation earnings;
b) This includes intelligence tests used as outcome measures; analytical, problem-solving, and planning measures; and assessments of Piagetian developmental stage;
c) Including not dropping out;
d) Including cooperation.

Measures of cognitive development, school achievement, and native language proficiency (collectively: 'cognitive outcomes') appear to be frequently gathered, presumably reflecting a similar emphasis in program objectives. The social justice rationale for an emphasis on cognitive outcomes is often stated in terms of equality of opportunity; its economic rationale in terms of international competitiveness (e.g. United States National Commission on Excellence in Education, 1983).

Cognitive goals are important, but there are also other important goals. There is a substantial literature favoring the empowerment of children, of families, of adults (women in particular), and of communities as a type of educational goal which has merits above and beyond whatever contribution empowerment may make to achieving cognitive or other standard learning outcomes (Paulston, 1979; Gitlin, 1990). Learning to cooperate is no less important as learning to compete, not just for the sake of empowerment but also for other reasons as well. Learning which improves group norms is at least as important as learning which improves individual behavior (cf. Kohn, 1986; Noddings, 1984; Richards, 1989). For argumentation in support of this viewpoint much more extensive than what can be advanced in this necessarily brief paper, see in particular Richards (forthcoming).

The Parents and Children Program evaluation in southern Chile illustrates this viewpoint because it was interested specifically in assessing the improvement of the capacities of children, their parents, and their communities to act in concert to solve their problems. Since it was an important goal of the program to empower peasant individuals and groups to act cooperatively to solve their problems, the evaluation sought to gather evidence which would logically imply that such an outcome was - or was not -being achieved. It was considered even more important to study the *processes* through which it was - or was not - achieved, because, as Robert Stake has written, "Outcome data can ascertain there is a problem and mobilize reformers to seek a remedy, but outcome data can seldom guide crucial change." (Stake, 1991). A somewhat similar, although not identical, point has been made by Eldering: "The effects reported in one location may not be reproduced in another location, let alone twice in the same location. Evaluation studies should therefore not concentrate on the question: 'Is this home-based programme effective in increasing the educability of children?' but try to provide an answer to the question: 'What characteristics of home-based interventions are effective in facilitating which areas of competence for which members of the families in which social context ?'" (Eldering, 1990, p. 57, citing Gray & Wandersman, 1980, p. 995). The general reason why outcome data are seldomly sufficient to guide crucial change is, in briefest outline, that the patterns of cause and effect relationships which function in the real world are not adequately discerned by analyzing outcome data (Scriven, 1974; Harré & Secord, 1972). Even if outcome variables are studied in relationship to every other kind of variable one can operationalize and measure, such as background, treatment, intervening variables, detailed studies of process not necessarily directly related to outcome data still provide much additional useful insight into *why* an effect occurs and into *how* improvements might be made (see Richards, 1985, chapter 7).

The processes studied in the Parents and Children Program evaluation included the group activities and meetings, the deliberations, and drawing of conclusions and the implementations of the conclusions in concrete actions. The direct study of these processes by participant observation and by cross-checking results was supplementary to the process of constructing and validating the verbal image discussed above.

The Parents and Children Program, and consequently its evaluation, was as much interested in whether the families and communities developed the ability to set and accomplish their own objectives, as it was in whether the children achieved pre-set objectives. Some of the objectives pre-set by the staff of the sponsoring NGO were consistently pursued, for instance improved school readiness. Other objectives emerged from the participants' deliberations about their situation, e.g. the need to work to reduce alcoholism in order to (among other things) establish better learning environments for children. Still other objectives, e.g. screening windows to keep flies out, were pre-set but dropped when the participants showed little interest in them.

An important part of the information which needed to be gathered in order to verify the growth of group norms favoring community cooperation, and to gain insight into how and why it had happened, concerned 'attitude change,' or, alternatively, 'value change,' especially as it related to overcoming apathy and discouragement. The methodology selected to gather such information owed much to the approach known as illuminative evaluation, which features communicable portrayal of concrete detail, and which was pioneered by Malcolm Parlett in the United Kingdom (Hamilton & Parlett, 1977).

In the planning of the evaluation, not a few informants urged that in order to communicate why Parents and Children had apparently succeeded both in community building and in serving traditional school-readiness objectives, the evaluation would have to evoke the program's *mistica*, a Spanish word which is a cognate of 'mystique,' but which might better be translated into English as 'a spirit of shared commitment'. It was also said frequently that the cause of the program's success was that the right staff members had been found, and the right volunteers recruited and trained. Hence the evaluation process faced the rather daunting task of gathering reliable information concerning a spirit and concerning several personalities, most notably that of Jorge Zuleta, the program's chief organizer in the town of Osorno.

Outside observers, funding agency representatives, and inside participants alike asked from the evaluation not so much proof *that* the program was a success, as insight into *why* and *how* it was a success. One distinguished outside observer asked in the evaluation's planning stages for insight into how such a program might be conducted in the absence of the perhaps unique charismatic personality of Mr. Zuleta.

Nevertheless, it was thought important to document *that* the program was a success in terms of standard goals relevant to literacy and children's cognitive development. For this purpose, and also for the purpose of documenting that substantial progress was in fact achieved in overcoming apathy and demoralization, a variety of quantitative and qualitative measures were used, relying on the logic of triangulation. "The logic behind the use of multiple measurement techniques is elegantly simple. It is referred to as the logic of triangulation (...) by concentrating on the point at which a series of independent, indirect, and perhaps weak indicators converge, we can effectively minimize their separate errors and maximize their overall validity." (Williamson, 1977, p. 84). The study was able to confirm superior performance of program children over non-program children through the convergence of data of various kinds, including IQ tests (reported also in Halpern, 1980), a draw-a man test, teachers' opinions of school readiness, and others (Richards, 1985).

Convincing evidence was obtained, through the convergence of many indicators, that there was attitude change away from apathy and toward the establishment of community organizations capable of mobilizing resources to meet needs. Evidence was also presented that the program was cost/effective, and indeed it is almost self-evident that such a program, if it can be made to work at all, is cost-effective, since it relies almost entirely on motivating the efforts of volunteers (Richards, 1985).

Evidently, in the Parents and Children Program study, and in other studies, decisions about what information to gather depend upon the program objectives, which in turn depend on the educational philosophy or macro-economic model that shapes how the agency sponsoring the program conceives its contribution to the welfare of society. The larger questions concerning the relationship of program objectives to broad policy objectives and to social change objectives are not usually part of the program evaluation; but they can be. An example of an evaluation which assesses the objectives themselves in the light of an ongoing staff dialogue concerning the global context is a self-study of the programs of the Bolivian Center for Educational Research and Action (CEBIAE). The evaluative self-study included a staff seminar that examined the situation of children in Bolivia in the light of trends in the global economy, political and economic changes in Bolivia in the context of Bolivia's role in the global economy, the values and ideals of the institution, and - in the light of these - re-examined the objectives of CEBIAE's programs (Richards & Richards, 1989).

5 How will information be gathered?

We will express our comments on methodology as answers to two questions about how to gather information, which are widely discussed among evaluators: a) How best to combine quantitative and qualitative research? b) Whether to do research using experimental designs or to study natural settings?

a) We advocate the judicious use of quantitative research, but we think it a mistake to equate quantitative research with causal models. It is a logical fallacy ever to deduce in social research a causal relationship from a statistical relationship between operationally defined variables.

We suggest that if one is mainly interested in preschool intervention as a way to produce outcomes standardly assessed by test scores or other conveniently quantifiable outcomes, then one will want to combine qualitative and quantitative studies in the following ways: A qualitative 'thick' ethnographic study is needed to show *what* (latin *quale*) is named by the process whose outcomes are being evaluated. For example, an independent variable coded as 'one-on-one tutoring' will gain in meaning to the extent that it is fleshed out by 'thick' description of the tutoring process. Similarly, quantitative studies showing significant relationships among operationally defined variables need to be preceded and followed by qualitative insights concerning the nature of the causal mechanisms at work; it is misleading simply to declare that an operationally defined independent variable is 'the cause'. For example, results showing that in-home tutoring of preschoolers by certified teachers raises test scores significantly, reflect complex aggregates of many events, many relationships, and many persons; much needs to be done to discern what it is that produces the observed result. In turn, new qualitative insights derived from careful observation should be subjected to quantitative checks.

If, however, the program goals imply that the evaluation should assess outcomes and processes that empower (or fail to empower) children, families and communities to solve their own problems, then the relationship between qualitative and quantitative research is somewhat different. Whether deliberative practices are being established and strengthened; whether group norms favoring cooperation are being invoked, extended, and created, whether concrete actions are being taken in the light of the conclusions of participatory decision-making processes, are questions best answered through participant observation, open-ended interviews, and the variety of individually weak but mutually supporting methods of triangulation. Premature operational definition of variables to be studied is best avoided; it is important, for example, to be sure one has found at least one genuine case of empowerment, before operationalizing an instrument for the purpose of counting how many such cases there are.

The interplay of quantitative and qualitative approaches can be brought out by considering the nature of measurement. Measurement is classically defined as assigning numerals to objects or events according to rules (Stevens, 1959). Measurement must be valid at a nominal level, before it can be valid at an ordinal, interval, or ratio level since the higher levels of measurement presuppose the lower. To be valid at a nominal level, measurement must correctly specify *what* is being named in a given category. Hence the qualitative, the *what*, is always presupposed by the quantitative, the *how much*.

When the achievement of subtle and complex objectives, such as strengthening a community's capacity to cooperate, is thrust to the foreground as the primary focus of an evaluation study, the interplay between quality and quantity which is always necessarily present in research, is thrust to the foreground too. It becomes especially important to create a vivid, palpable, communicable picture of *what* is happening. A really good program evaluation should provide the reader with such a vivid picture of what the program is, and how it works, that if the reader were to go to the program site, the reader would know how to join the scene and interact with the participants. When qualitative information drawn from community participation is aggregated in order to measure the dimensions of the phenomena reported, the appropriate techniques may be rather different from the techniques used to aggregate data sets from test scores and surveys (see Richards, 1985). In the Parents and Children Program study, for example, aggregation was done through the validation of the verbal image and through triangulation.

b) Somewhat similarly, the balance of considerations weighing for and against the use of experimental designs is altered by a shift of objectives from the learning of individual skills to the learning of group cooperation. As noted above, the empowerment of the group may be impeded by the need to follow a manual in order to be sure the level of implementation of the planned treatment is sufficient to comply with the design. Ethnographic and participant techniques, on the other hand, tend to reveal many features of the context in the multi-faceted real world situation under study.

The arguments for experiments are relatively stronger and for naturalistic study relatively weaker in the case of individual skill learning. An experiment, according to Henri Poincaré's classic definition of the term, is the introduction of a known change into a known system. In the study of individuals acquiring skills, it is easier to achieve or to approximate the conditions for a true experiment because one is studying an individual instead of a complex set of norm-guided social relations, and specific skills instead of complex social norms like those encouraging or discouraging cooperation.

Studies in natural settings are able to understand norm-guided behavior in the contexts where the norms to be studied are meaningful and effective (or ineffective). For example, if a program participant says, "Jose is probably at home changing diapers," a good participant observer can discern whether this bit of discourse is intended to insult Jose or to praise him. The naturalistic study is where the action is (Guba & Lincoln, 1981; Dockrell & Hamilton, 1980).

In any case, whatever the objective, and whoever (individual or group) is supposed to achieve it, data showing whether particular educational procedures work are best obtained in settings (experimental, quasi-experimental, or natural) where the variables thought to be important can be carefully examined and analyzed. This is rarely the case when one evaluates a large program. It follows that in massive programs in the field, continous evaluation is only a part of the process of determining whether particular educational procedures work. It complements what is learned in smaller settings. Large-scale evaluations, and many small-scale ones, should focus on whether teaching techniques already considered to be good ones are actually being applied (see Charters & Jones, 1980; House, Glass, McLean & Walker, 1978).

Care must be taken, in any event, in extrapolating from even the most careful studies. Just because a method gives good results in, for example, an intensively-studied laboratory school, it would not be valid to draw the conclusion that it should be applied massively across a great number of varying school and home settings. For example, it is frequently the case that what will work in a given context depends on local politics, even on family or neighborhood feuds, or on the ramifications of national politics at the local level (see Richards, 1985). What will work educationally is to a great extent a function of what Clifford Geertz calls 'local knowledge' (Geertz, 1983). Thus Slavin and Madden write of Success for All, "(...) the program itself varies in important ways from site to site depending on the nature, needs, and resources of each. What is common to all Success for All sites and must become common to high-poverty schools as a whole is a relentless focus on the success of all children (...)" (Slavin & Madden, 1993) In other words, practice is guided at least as much by commitment to values as by knowledge. And, as we have been pointing out, the very definition of the knowledge to be sought depends upon the goals pursued.

The program staff, or someone in the sponsoring agency, or some consultant, should be both well-acquainted with the local scene and in touch with global research and reflection. A threshold question for a naturalistic evaluation might be whether such is in fact the case; thereafter, it is a key question how well the program has adapted techniques which have succeeded at some site or sites, and have made valid adaptations of them to the realities of a given context. The need to fit practice to the realities of a here and a now is especially urgent if the aim is, first and foremost, to work to empower the communities served.

Naturalistic methods typically rely less on assigning subjects to treatment and control groups, on requiring consistency of treatment across experimental sites and over time, and on testing of subjects. They are typically less obtrusive, and they call for fewer changes in the behavior being studied. Hence they have the advantage that threats to validity posed by the impact of the research itself on the outcomes are decreased. They also have the related advantage that the emerging objectives of a program and its rapid adaptation to circumstances are constrained less by the need to preserve the logic of the experimental design. These advantages are comparatively greater when an important goal of the program itself is to foster democratic objective-setting among the target population.

The Parents and Children Program evaluation went a step farther. The evaluation process not only sought to avoid requiring behavior which, although lending itself to measurement, might interfere with the spirit of the program and with the peasants' sense of control over the program; the evaluation process positively endeavored to be loyal to the project's general aim of encouraging participation and cooperation. The evaluation was one more context in which the program sought to nurture the growth of self-reliant cooperation in local communities. In important respects both the program being evaluated and its evaluation deviated from the norms of 'instrumental rationality' (Horkheimer, 1974), because neither completely identified its success or failure with achieving or not achieving aims and objectives, and both sought to be processes faithful to certain values.

6 Who will plan, implement, and use the evaluation?

It is often said that evaluations are to be used by 'decision-makers'. Management, in education and elsewhere, is sometimes said to consist of processing information to produce decisions. If one accepts the idea that the users of evaluations are to be the decision-makers, then the question who will plan, implement, and use the evaluation is closely tied to the questions who does, and who should, make the decisions.

A massive fact which needs to be taken into account is the lack of funding for early childhood programs, or for anything. Partly because funds are short, government budgets and NGO budgets are more and more geared to using paid staff to catalyze the attraction of the time and the energy of family members and other volunteers. Another massive fact is that parents, mothers especially, are commonly overworked (Boulding, 1976). The search for people with time and energy to devote to child care consequently turns in the direction of older siblings, grandparents, and people in the neighborhood who may be unemployed or underemployed.

A consequence of these massive facts is that preschool intervention programs have opportunities borne of the budgetary constraints of agencies and the time constraints of parents. There is an opportunity to promote family and community unity, and an opportunity to promote dignified and socially useful child care roles for the unemployed. Insofar as the time constraints of mothers are especially severe, childhood intervention programs have an opportunity, for the sake of the children, as well as for the sake of the women and for social justice, to promote more equal sharing of child care tasks among men and women.

The people who are making day-to-day decisions about how to organize and implement better learning environments for children are, to a large and increasing extent, volunteers from local communities. If the old saying is true, that "those who pay the piper call the tune," then governments and agencies should recognize that since their ability to pay the piper is impaired, then so too is their ability to call the tune.

Democratic ideologies which favor on principle devolving decision-making power to local communities (e.g. Gitlin, 1990) are reinforced by practicality. Parents, family members, and volunteers, will do what they are motivated to do, and what makes sense to them. They are important decision-makers. Hence evaluation results that speak to them in language they understand, and most of all evaluation results they themselves have created and consequently have a stake in, will be more significant than evaluation results that speak only to high-level officials, whose ability to make decisions is, in any event, severely restricted by budget constraints, as well as by the lack of the detailed local knowledge which is needed to make valid decisions concerning the welfare of particular children.

The importance of research using experimental designs, which provides proof of effectiveness in relation to long term objectives, through replication and corroboration, should be neither underestimated nor overestimated. The results of such research need to be applied wisely, taking care not to overestimate their external validity; and they need to be complemented by other forms of evaluation research.

In conclusion, where enhancing community cooperation is a major goal, the evaluation process should on the whole tend toward being cooperative. Information should be gathered on the processes through which cooperation is, or is not, achieved. Qualitative and quantitative methods should be combined to check the former's insights with the latter's logic, and in order for the former to flesh out with useful detail the findings abstractly summarized in the numbers in which the results of the latter are reported. In local project evaluations, naturalistic observation should as a rule be favored over experimental design. Project and program participants should be centrally involved in planning, implementing, and using local evaluations.

With respect to this last, good examples of suitable techniques are to be found in publications of the community forestry unit of FAO. That unit has developed participatory evaluation techniques as an integral part of involving the whole community in reforestation and in the improved use of existing forests. Many of their techniques could be applied, with suitable modifications, to involving the whole community in improving preschool education. For example, the community forestry unit has developed twenty-three tools for participatory assessment, monitoring, and evaluation, including group meetings, drawing and discussion, murals and posters, flannel boards, open-ended stories, community case studies, maps and mapping, semi-structured interviews, ranking and sorting, survival surveys, community financial accounts, popular drama, community directed visual images, community directed tape recordings, community directed video, puppet theatre, and seven others (Davis-Case, 1989).

It should be noted, however, that one of the purposes of community-based evaluation is to validate and improve the discourse and practice the community already has. For this reason, evaluation practices should insofar as possible be hinged or grafted onto what the community is already doing. The introduction of new practices, even when the new practices are appropriate participatory techniques used successfully elsewhere, should be secondary to supporting and extending the constructive practices that already exist in a community.

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EPILOGUE

RESEARCHERS, PROGRAM DEVELOPERS, AND THE CHILDREN OUT THERE

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When there is no famine, civil war, plague or any other disaster, the traditional methods of child rearing observed by African mothers produce healthy and developmentally advanced children.

Ibinabo S. Agiobu-Kemmer, 1991.

Thus, psychological overload, rather than ignorance of the principles of effective parenting, may explain differences between poor and non-poor parents' style of interaction with their children.

Vonnie C. McLoyd, 1990.

1 The state of the art and the state of practice

The participants of the Conference 'Family, School, and Literacy' form a sample drawn from a rather restricted population of program developers, researchers and related specialists in the field of Early Childhood Care and Eduction (ECCE). It would have been difficult to form many more groups with other people with similar expertise as those making up the conference. With the notable exception of African contributors, many of the missing people show up in the references or belong to the networks of the participants. It may be reasonably stated that the collective views expressed during the meeting give a fair picture of the State of the Art in ECCE.

This assumption is corroborated by a recent, extensive study on the situation of and trends in ECCE by Myers (1992). His findings largely correspond with the outcomes of the conference. Myers further contrasts the State of the Art (what is feasible) to the State of Practice (what is mainly happening) and in this way offers options for program development and research initiatives. It is encouraging to see that the recommendations formulated at the Conference reinforce and reemphasize Myers's observations. This is a significant outcome, as it contributes to the growing body of evidence demonstrating that, in principle, the ECCE community has the knowledge and the skills to address the needs of children and their families. At the level of practice there is sufficient agreement on the various ways of how to attain these.

There is, indeed, a global trend to look closer at 'good practice' and to be more cautious with supporting experimental projects, innovations, and the like. A strong case is made by the International Youth Foundation. This organization, although mainly concerned about an older age group of children (five till twenty years) has taken the radical step to invest in 'what works' rather than in 'finding new solutions' (International Youth Foundation).

The Conference can best be seen as a serious attempt to move the State of Practice further up to the level of the State of the Art. This quest is not an easy assignment: worldwide developments run against the well-being of children. In the United Kingdom alone, for example, the number of children living under the poverty line have doubled during the Eighties (Pascal, 1992), developments in other parts of the world leave little room for optimism (see, for example, Bennet in this publication).

One of the greatest obstacles to progress is formed by the strong barriers that keep the 'target audiences' - in most cases read: poor families and communities - from participation and from access to services, information, and control.

2 Strong biases against the disadvantaged

Few people falling under the term 'disadvantaged' would welcome being labelled this way. Thus, when a group of 'marginalised' mothers from Scotland read that they were described as such they felt made more inadequate and strengthened in their belief that the problems they faced where mainly caused by them (The Kermit Club, 1992). The users of the word 'disadvantaged' and of similar approaches to denote people who live in adverse circumstances or cannot live up to middle class standards should not worry, though: the Scottish mothers are an exception. The poor's access to the thinking and deliberations of those who make up such labels is - on the whole - securely blocked. Chambers (1988) and Hancock (1991), among others, demonstrate the virtual impossibility of getting into contact with poor families. It is given to few outsiders to know poor people or to get access to their knowledge. Hancock is particularly gloomy about the positive impact that the donor community has had and can have on the lives of poor people. He presents a convincing picture of helping experts who - in the name of working for the poor - only seem to be helping themselves, albeit at the expense of their clients. For many people living in poverty the term 'development' has become synonymous with alienation, increased vulnerability, and misfortune. Many mistrust or reject the advice imposed upon them by 'external agents'.

The outcomes of the Conference and the deliberations reflected in this book, should be assessed against this backdrop. The central question then is: will children benefit? Will they be better off as a result of the gathering? The very publication of the proceedings by UNESCO is a first and a good step in the right direction and will lead to a wide dissemination of results: UNESCO educational publications often end up in places where few other materials appear. More follow-up is required to produce some tangible impact, however. It is argued that current thinking about and practice of working with *intermediary* organizations and *grassroots* groups offer a glimmer of hope to attain this impact. The position of central governments, research institutions, and donor organizations have to be revisited in this light. The role of support groups and intermediary organizations have somewhat been under exposed at the conference, yet they are worthwhile mentioning as they show promising avenues on how to involve people living in poverty. Whether these avenues will actually be taken depends very much on the commitment of the initiators and participants of the Conference, as well as their peers. Experience shows that as far as declarations of good intent are concerned, conferences and similar events do not score very well.

3 Support groups

Most parents living in adverse situations are still capable of creative action (see also Richter in this publication). This is particularly the case when they can band together with others in similar circumstances and form mutual support groups. Jointly, they are better able to get the professional input they themselves alone cannot generate. If parents manage to form groups, or become members of existing ones, their lives and those of their children immediately gain in perspective.

Group formation and self-organization are increasingly seen as the prime conditions for development, as well as their main objectives. If people come together to share their problems and experiences, then a most important step has been made to resolving these problems (Van Oudenhoven, 1989).

Social support, self-help, grassroots or other non-formal groups established by people facing similar situations can offer their members moral and emotional support, information and actual or instrumental help. Their threshold is low, the approach is multi-disciplinary and relevant for the local context. Contribution and participation by the participants is often great. Support groups respond to immediate needs of the people and the interaction among the members is usually considered as meaningful. Within these groups, boundaries between people become vague or disappear. It is often hard to point out who is the professional, volunteer, helper or person in acute need. Their roles change, overlap and may reverse. Support groups are problem and outcome oriented, do not focus on flaws or weaknesses of their members and avoid value judgments.

There is ample documentation on the successes of support groups: they reduce stress and anxiety, promote mental and physical health, diminish stigmatisation, and increase feelings of self-respect, self-confidence, social competence, personal autonomy or empowerment.

Parent and other local groups are far better placed than governmental organizations to locate the 'invisible' poor and to meaningfully relate to them, or to incorporate them in their group work. (for an overview see for example: Albrecht & Adelman, 1987; Gottlieb, 1988; Van Oudenhoven, 1991; Weiss, 1989). Not surprisingly, it is again the poor or 'unsuccessful' families that cannot avail themselves of this kind of safety provision. Their internal cohesion is often low to start with, they are poorly organised, find it difficult to work together and do not have the right sort of contacts or access to information. They are often on their own, isolated. Lewis (1966) already declared more than two decades ago that 'the culture of poverty', with its devastating impact on self-image and group formation, were incompatible. This statement can be interpreted in two ways: severe poverty can demolish social groups, but also that support groups may diminish the effects of poverty. There is sufficient evidence to show that both processes occur, and this in itself provides a strong argument for enabling people to form support groups.

It seems fair to say that the common thread in most of the successful programs 'or projects for disadvantaged children and families is that in some way or other the parents (mothers) can come together and talk about things that matter to them. Project success is almost invariably related to the presence of social support groups or substantial social networks. Could it be that parents' groups are a more potent factor in ECCE programs than parental involvement in the (pre-) school environment of the child?
Groups organised and run by parents and reinforced by other community members hold indeed a good deal of promise: they are effective, can readily lead to other forms of social action and are fairly low-cost. Furthermore, they 'can come up with a variety of alternatives greater than any professional can imagine' (Kool, 1991) and '(in Africa) ordinary people know a lot' (Salole, 1991).

The phenomenon of informal and non-formal support groups is nothing new, of course. They have been in existence since time immemorial, and still are part and parcel of human life almost anywhere. The (re-) discovery of these groups, or the increased interest in them as building blocks in human development is to be welcomed. For too long, initiatives at the base have been neglected, replaced, or even rooted out. The first assignment seems to be to recapture (or *rescatar* in Spanish) what was in place, and to save what still can be saved.

4 Between the grassroots and the government

Self-help groups, if not supervised or controlled by statutory or governmental institutions, are versatile and firm. Barring extreme repressive regimes, they can blossom under almost any circumstances, regardless of the political, geographical, cultural or economic conditions. The quality of these groups seems to be determined by the presence of an open and democratic organizational climate (including good book-keeping) as well as the embeddedness of the group in horizontal and vertical networks (Esman & Uphoff 1988).

These groups with their independence, creativity and force often do not fit the institutional mould, can not readily be put under one administrative department, may make professionals feel redundant and pursue their own priorities. The formal system may see this as a menace and respond accordingly. It could, however, also look at these groups constructively and recognise them as fertile soil for partnership and an invitation to re-think its own policies on child care and education.

A positive illustration of how governments could act is presented by the Milanese municipality on how it reacted to an activity grown outside their span of control. Here a group of university staff, together with local mothers, set up a kind of reception centre. This place was opened to children and their mothers, or grandmothers, without putting any 'entry' demands on them: they could come and go as they liked. The outcome was that parents and children, who otherwise would have been left out did participate, with notable improvements in their lives. The local government whole-heartedly accepted the group's philosophy and approach, and reacted by providing the space, and paying for the running costs of personnel and facilities. The 'model' is now spreading throughout the city of Milan and beyond (Bondioli & Mantovani 1987). The municipality could readily have blocked the initiative by insisting that standard rules and regulations be followed such as number of children per childminder, attendance, professional level of personnel, followed curriculum or total of hours worked. The list looks familiar and could be easily, indeed quite justifiably, expanded. Had these 'minimum required quality standards' been introduced, the endeavour would have been dead by now. The Milanese formal system had the foresight not to interfere.

The gap between a small group of women in a rural area or slum section of a big city and the vast bureaucracy in the capital is wide and deep. Both, however, are, or should be, part of the same social fabric. The functional relationship, in its essence, is one of interdependence: all governments depend on their people and vice versa. The experienced relationship, however, could be one of utter dependence (as felt by the groups) or of insignificance (as sensed by the government and support groups alike). Genuine communication between them can only happen through other bodies, or intermediary organizations. An intermediate infrastructure has to be developed or strengthened.

Verhagen (1987), among others, has developed some useful ideas in this respect. He uses the concept of 'self-help organizations' (SHOs) in describing grassroots groups and 'self-help promotion institutes' (SHPI) for intermediary bodies. Verhagen postulates that SHOs need the formal system to survive. He distances himself from the thinking that argues that marginalised groups should build up an existence unrelated to the formal system, or even to destroy it.

Verhagen, and many others with him, are in line with the *educación popular* movement that has its roots in community work in Latin America. One of the leading processes within this movement is to 'empower' groups and networks of groups to negotiate with the government for better deals for themselves (Brouwer & Martinic 1991). Especially noteworthy is that Latin American NGOs initially started off fighting against the formal structure, arguing they could bring about sustained change of significant scale outside government organizations. They have now come to realize that collaboration with the government is ultimately in the interest of all parties concerned, including the target audience they seek to serve.

Grassroots groups cannot work in isolation for long. Ultimately to consolidate and further their cause they should make associations. Grassroots organizations working together in associations would find it easier to work with professionals, gain concessions from statutory organizations, local governments or other segments of the establishment. Representatives of these associations could in their turn form higher-level organizational structures and so on. An elaborate intermediate structure arises. In the long run large pyramids of inter-linked groups may emerge with at the base the grassroots groups and at the top umbrella NGOs or the government. From the bottom upwards, the nature of the members and organizational style will gradually change. Usually this long process starts with work carried out by volunteers, often women!, in an informal fashion, to be gradually taken over by salaried professionals - more often men than women (see for instance: Holman, 1988) engaged in a formal structure. Verhagen now sees a special role for the SHPIs, especially in their relationship with the SHOs, the grassroots groups. Some of the principle tasks SHPIs should assume are to:

- provide training, access to information and existing facilities;
- advise on managerial, financial and administrative matters;
- assist SHOs in linking up with other SHOs ('networking');
- cooperate in the production of information materials;
- help generate financial and other resources;
- support in participatory research, monitoring and evaluation; and
- liaise between governmental or 'bigger' NGOs and local groups.

The SHPIs, which according to Verhagen, should ideally not have more than 20 to 30 staff, could also form alliances with similar SHPIs and thus form a movement or structure with wider regional or national responsibilities. This horizontally and vertically expanding network of intermediary organizations could establish working contacts with central government at various levels.

There is good evidence that large, inter-linked structures can remain dynamic and sensitive to the needs of individual people and families. A study of three BINGOs (big NGOs) in South Asia mentions a number of conditions that should be fulfilled lest these BINGOs themselves turn into bureaucracies. There should be a greater degree of decentralisation, bottom-up planning, centralised planning and the presence of a monitoring and evaluation system (Beets, Neggers & Wils, 1988, Muralidharan in this volume).

Another useful, conceptual distinction in the debate on intermediary organizations is that of Membership Support Organizations (MSOs) and Grassroots Support Organizations (GSOs).

GSOs are civic developmental entities that provide services to local groups, disadvantaged households, or individuals. They often are staffed by committed professionals who do not hail from the communities they serve. They possess or have access to specialised skills and contacts. In this publication, Filp, for example, represents the work of a typical GSO of repute. MSOs have similar features but represent, and are accountable to, their members who have direct roots in the communities. The literature abounds with references to the potential and actual accomplishments of MSOs and GSOs in providing services for the poor, enhancing their participation, building up their own capacity and support networks, and in generating innovative action (see for example Carroll 1992; Edwards & Hulme, 1992; for recent illustrations and policy implications).

5 The emerging new professionals

SHPIs, MSOs, and GSOs are stations between the predominantly informal grassroots groups and the formal system. Their staff speak both 'languages' and are capable of feeling at ease in the two worlds. They may still have volunteers on their staff, but most of them will be salaried people, with formally certified expertise: professionals. In the ideal situation whereby the parents and community leaders who make up local support groups are seen as equals and specialists in their own right, these professionals should look different. Too often now professionals, in their efforts to solve the problems for the poor or 'marginalised', formulate solutions, control and implement programs. In fact they end up emasculating instead of enabling or empowering. In this traditional 'helping' mould, they tend to take away the initiative from families, and, with this, their self-confidence, dignity, independence and capacity to formulate their own coping strategies (see Achterhuis, 1982; Barker, 1987; De Winter, 1986 and Gottlieb, 1985).

The new professionals enable, facilitate, open up doors, encourage, offer training, liaise, and withdraw when not needed any more.

It is obvious that professionals or external agents have to tread carefully. Professional expertise should only be shared with confident counterparts, who are not intimidated by a more sophisticated approach or abundance of 'higher order knowledge' and position. Building up cohesion and confidence of the target audience should be a first concern of the professionals or external agents and in any event happens before suggestions are made to change their habits and attitudes (see also contribution by Richards).

The new role model for professionals is in many places still utopia: established professional organizations almost anywhere in the world work against the prospect of an empowered clientele. The disguises are credible enough and, in the main, boil down to arguments saying that professionals know best and are the gatekeepers of quality. The bottom line is, however, that their jobs and power status are at stake.

6 Distance versus proximity: complementary positions for professionals

The Conference brought together an interesting mix of people. Some of them came from places where the costs of maintaining a dog is many times higher than the average family income in the country of other participants (Jaegerman 1992: in the US it takes well over $ 1000 to keep a canine); some came from a country that sees its population annually grow in amounts equalling the total population of somebody else's country (the population in India increases with over seventeen million people per annum; the total population of The Netherlands is fifteen million). Some participants belonged to governmental bureaucracies, others to the donor community, grassroots support organizations, or research institutions. Interaction occurred at many levels and from different perspectives. As said before, it was not easy to assemble such a group; it may be called a small miracle that these people got along together well and experienced common ground. Achieving such understanding is not an easy process, and requires efforts on all sides. The chemistry between the participants offered some useful insights into how different professionals could 'interface' with each other.

A meaningful way of looking at their interaction is to put the participants (and with them, others in the field of ECCE) on the dimension proximity - distance in regard to the target audience. University-based researchers, government agents, staff of international organizations and foundations, are at a distance from children and families; people working for GSOs or MSOs are close to them. This difference entails a number of significant additional features. The former group deals with a population expressed in rubrics, for example: minorities, disadvantaged; they are mainly accountable to peers; their products are abstract: reports, policy guidelines, funding of programs; and their concerns are narrowly defined and

may include areas of research, departmental responsibilities, mandates. The latter group deals with concrete, known people: the Rodriguez family, Salima, Ram. They are also held answerable by the clients they seek to serve; their products are tangible: number of children under care, better health, higher income, access to services; and their concerns are wide: they may have to deal with education, security, family conflict, and whatever else comes their way.
How then, one could ask, can these distinct groups work together at all?

The Conference offered part of the answer to this question. The people 'at a distance' usually have larger networks; the prestige, means, and authority to validate experience and knowledge; and impressive technical expertise. These all are qualities desperately needed by those working 'at proximity'. GSOs and MSOs offer meaning; access to the children; and form the ultimate testing ground for any intervention; they produce a constant stream of innovations waiting to be tapped (Carroll, 1992; Kool, 1992; also see Serpell in this volume). These are ingredients that should be warmly welcomed by those who are far away. The interweaving of the groups, as started to happen at the Conference, is the sort of process that should be continued.

Conclusion: A call for joint action

It is now realized that developmental disadvantage in children stems from insufficient support and experience in any and all key social domains, rather than in any one (Natriello et al. 1990). For small children these domains are the family and the community. When they grow older the school gains quickly in significance. For adolescents and adults, domains at regional or national level become relevant.

The care and education of young children should therefore, though indeed cannot, be an isolated effort directed at children alone. Families have to be supported, but communities have to be supported as well. A 'sick' community, not unlike sick parents, cannot care for its children either. This support not only calls for vast financial and human inputs, but also for concerted action between the grassroots groups, NGOs, research institutions, donors, and governments. The Conference has been a platform of such joint action.

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FAMILY, SCHOOL AND LITERACY

RECOMMENDATIONS FOR INTERVENTION PROGRAMS

Preamble

There is a growing awareness of the need for early childhood care and education, especially for children growing up in economically and socially adverse conditions. UNESCO's activities in this field include the well-known World Conference on "Education for All by the Year 2000," the Mobilizing Project "Combating Illiteracy" and the "Young Child and Family Environment Project" (1990-1995). Following these activities and in anticipation of the "Year of the Family" (1994) declared by the United Nations, the Netherlands National Commission for UNESCO has established a task force on intervention. The task force was to focus on three interlinked areas:

- Intervention programs, description and evaluation
- Linguistic and cognitive development of the individual child
- Intervention in cultural context.

The task force, in cooperation with the Bernard van Leer Foundation convened an international group of 40 experts, including intervention practitioners and theorists, and scientists from relevant academic disciplines. They met in The Hague in September 1993.

Drawing on their collective experience and insights this group drafted the following recommendations which are meant to reflect the state of the art and current concerns about intervention at the interface between school, family and literacy. The recommendations address the societal precursors to literacy as well as the precursors to the individual acquisition of literacy in primary education. Literacy training cannot be seen apart from the goal of achieving social equality between and within societies. In formulating the recommendations, the group was concerned that children should not only be viewed as future adults, but also seen as persons in their own right.

The recommendations include both general guidelines for the conceptualization of intervention programs directed to populations under adverse conditions and more specific guidelines for the implementation of interventions directed at literacy and school success.

Recommendation I

Preschool literacy experience is important so that all children are prepared for schooling. For some children these experiences should be provided through special programs.

Recommendation II

Children and parents as target groups for intervention programs can be identified in various ways. They include at least those in economically and socially adverse conditions, subordinated ethnic and migrant minority groups, and individual children with a physical or mental handicap.

Recommendation III

Concern for literacy should be combined with concern for the survival and optimal development of the well being and competency of the child. This implies an integration of health, nutrition, psycho-social, and cognitive interventions, in a fashion appropriate to local needs.

Recommendation IV

Early childhood programs should actively seek out and build on existing inherent strengths in families and communities, as well as respond to their diverse needs.

> It has to be recognized that intervention programs can be used to strengthen the position of mothers as primary care-takers, among other things by lending more prestige to care-taking.
> The role of the father, of siblings, and of grandparents in extended families has to be considered; the negative as well as the positive implications.

An intervention program introduces new and potential foreign or even incompatible elements into an existing cultural context with its own role patterns, value system, and parental ethno-theories. In the design and adaptation of intervention programs these have to be taken into account.
"Gender issues", both at the child and family levels should be incorporated where necessary in the design of all programs.

Recommendation V

The understanding of the socio-cultural context is essential for any intervention. Despite the difficulty of predicting all potential consequences of an intervention in a society, decisions-makers have the responsibility of trying to anticipate unintended effects.

An intervention program can affect existing social patterns and relationships in many, often unexpected, ways, especially if the program is meant to effect major alterations in the lives of children.
This recommendation is especially relevant if literacy programs or other major intervention programs are introduced in an illiterate society.

Recommendation VI

It is important to support, strengthen and (when necessary) change systems of primary education. In order to sustain the literary gains initiated during the preschool period.

Recommendation VII

There should be a continuing dialogue between decisions makers in intervention programs and in school or preschools receiving children with a view to facilitating transitions between contexts.

Recommendation VIII

The specific objectives of an intervention program should be created in a process of collaboration and negotiation, based on mutual respect that involves all parties. Included should be caregivers, representatives of the community, institutions, and professionals. This implies that objectives are not static, they may change over time and that emergent consequences should be considered part of the process.

> Sufficient time and resources should be allotted for this process, in order to identify the special contributions of each party involved, to agree upon goals and to define responsibilities.

Recommendation IX

Early childhood programs may fail if they ignore the role of women in family life. Special attention should be given to the situation of mothers and other primary care givers in extremely adverse conditions.

Recommendation X

Intervention programs should be informed by current good practice, research and theory in child development; program developers and officials in charge of intervention have to keep themselves informed of findings in relevant areas of research.

> In addition to development psychology and educational science relevant research areas include (but are not limited to):
>
> - language acquisition and literacy, e.g. recent findings that children's vocabulary skills are better predictors of reading outcomes than print skills;
> - cognitive psychology, eg. recent results on the importance of meta-cognitive processes;
> - culture-behavior relationships, e.g. the balance between universal goals of literacy and cultural diversity.

Research is especially required:

- on communities, families and children, with a view to building theory and informing programs regarding the specific context in which they are operating.
- on specific cultural and linguistic needs of ethnic groups and needs of children with a physical or mental handicap.
- on variations in approaches to intervention and practices of program implementation.

Caution should be taken against uncritical acceptance of ethnocentric concepts and ideas regarding human development. It is necessary to make more visible dimensions such as cooperation, solidarity, enjoyment, patience, sensitivity.

Recommendation XI

Intervention agents (professionals or para-professionals) for the execution of certain tasks within programs should be chosen after consideration of the objectives of an intervention program, the skills and training of the agents, their familiarity with and accessibility to local families and available financial resources.

To do justice to the role of the para-professionals, the following is needed:

- institutional support by senior program staff;
- ongoing training;
- adequate remuneration;
- feedback on performance;

The distinction between para-professionals and professionals tends to coincide with that between insiders and outsiders; insiders have important local knowledge, outsiders can be supposed to have technical expertise on intervention.

Recommendation XII

Since an intervention program can affect the life course of the participating children and their families, and since implementation of any effective program requires considerable human effort and financial expenditure, it is essential that the extent to which the objectives of a program are met be critically evaluated.

Evaluations should identify the conditions under which an intervention will or will not work, and the factors necessary for success.

Before an intervention program is administered on a large scale there has to be evidence of its effectiveness.
Funds for evaluation should be tied to funding for intervention programs.
Internal and external evaluators should work together to achieve a fair assessment of the program.

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The conference 'Family, School and Literacy: the preschool period' on the theory and practice of early child intervention in the context of literacy was an initiative of the Netherlands National Commission for UNESCO. The Commission is an independent advisory body to the government and operates as an intermediary and channel for co-operation between UNESCO, the Netherlands and its intellectual community.

The conference was jointly organized with the Bernard van Leer Foundation, an international, professional institute which concentrates on the development of low-cost community-based initiatives in early childhood development for socially and culturally disadvantaged children.

Support was also provided by the Netherlands Ministry of Welfare and Culture. UNESCO promotes throughout the world the Education for All initiative launched at the Jomtien Conference in 1990. A major innovation in educational thinking legitimized by that Conference was the recognition that learning begins at birth, and that the health and education given to infants and young children in the home are the essential building blocks of future learning.

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